A BPI PUBLICATION

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# LANDSCAPE MANAGEMENT

SERVING GOLF AND LANDSCAPE PROFESSIONALS

2nd annual seed pocket guide

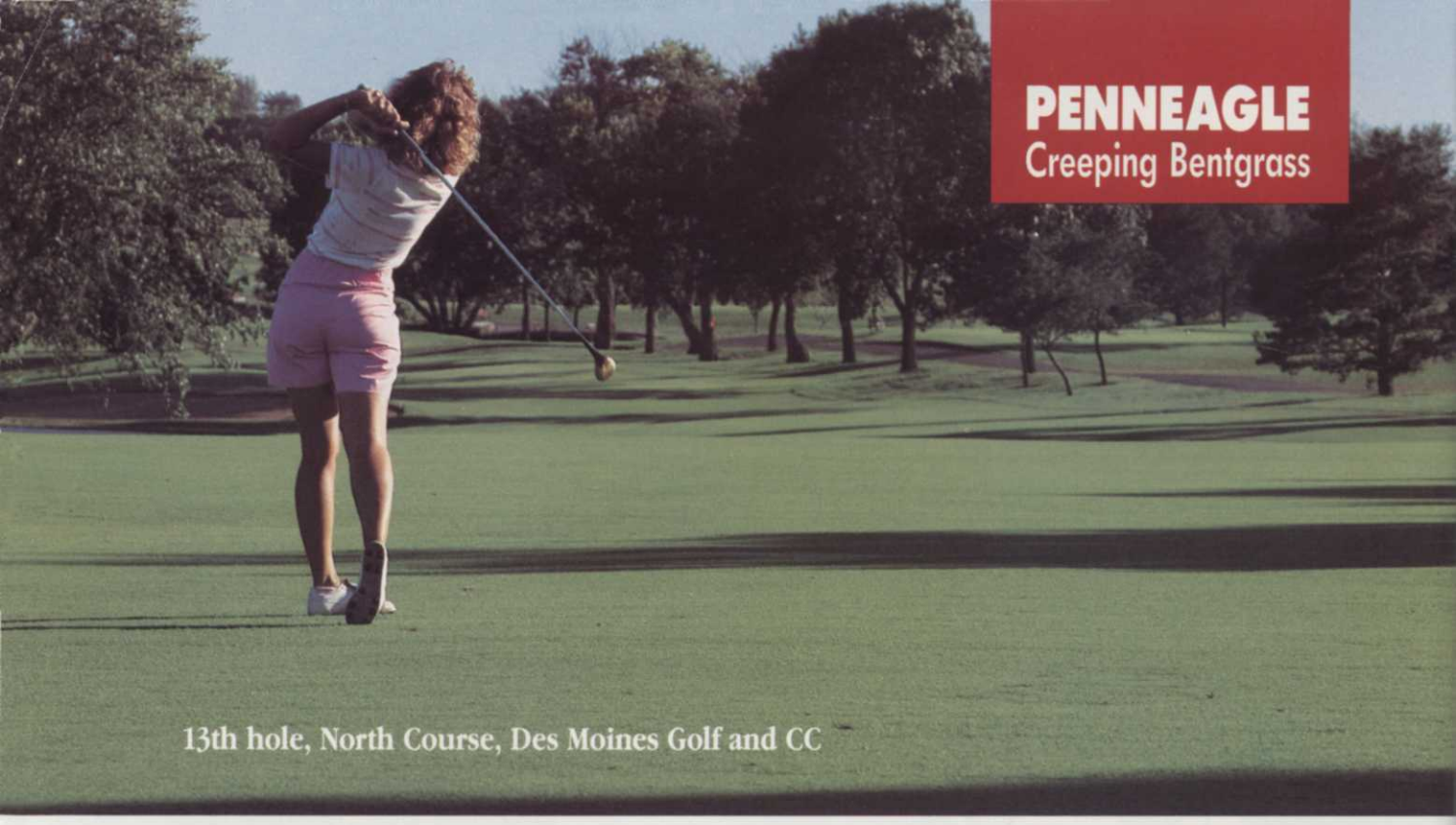
## LIKE A GOOD NEIGHBOR

### Roadside vegetation management

Outdoor power trends

Worker disability

bility




13th hole, North Course, Des Moines Golf and CC

# "SINCE WE REPLACED OUR BLUEGRASS FAIRWAYS WITH PENNEAGLE, PLAYER SATISFACTION IS UP 500%"

Bill Byers completely renovated all 36 fairways at Des Moines Golf and CC over a period of three years ... nine in 1985, nine in 1986 and the remainder in 1987.

Three days after spraying the existing bluegrass/Poa annua fairways with a non-selective herbicide, Penneagle was slit-seeded into the surface. When play resumed in seven days, members had the option of playing from the germinating fairways or taking a drop in the rough.

Bill finds that lightweight mowing keeps the Poa population in control. "I used the clippings for garden mulch one year, that resulted in a terrific stand of Poa. This illustrates the effectiveness of removing clippings and seed heads."

Overall, the new Penneagle fairways require less water than trying to maintain the old bluegrass/Poa fairways, and Penneagle proved to be drought tolerant during the dry summers.

"Bentgrass fairways are in demand in our area. Other courses in Des Moines have made the switch," says Bill, "And we find that our player satisfaction is up 500%."

*Bill Byers, CGCS*
*Des Moines Golf and CC, Iowa*

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Penneagle is one of the "Penn Pals"

**Tee-2-Green Corp.**
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Circle No. 134 on Reader Inquiry Card

JULY 1990, VOLUME 29, NUMBER 7

# LANDSCAPE MANAGEMENT®

On the cover: Roadside managers link the highway system and neighboring habitat (photo courtesy of Monsanto Ag Co.)


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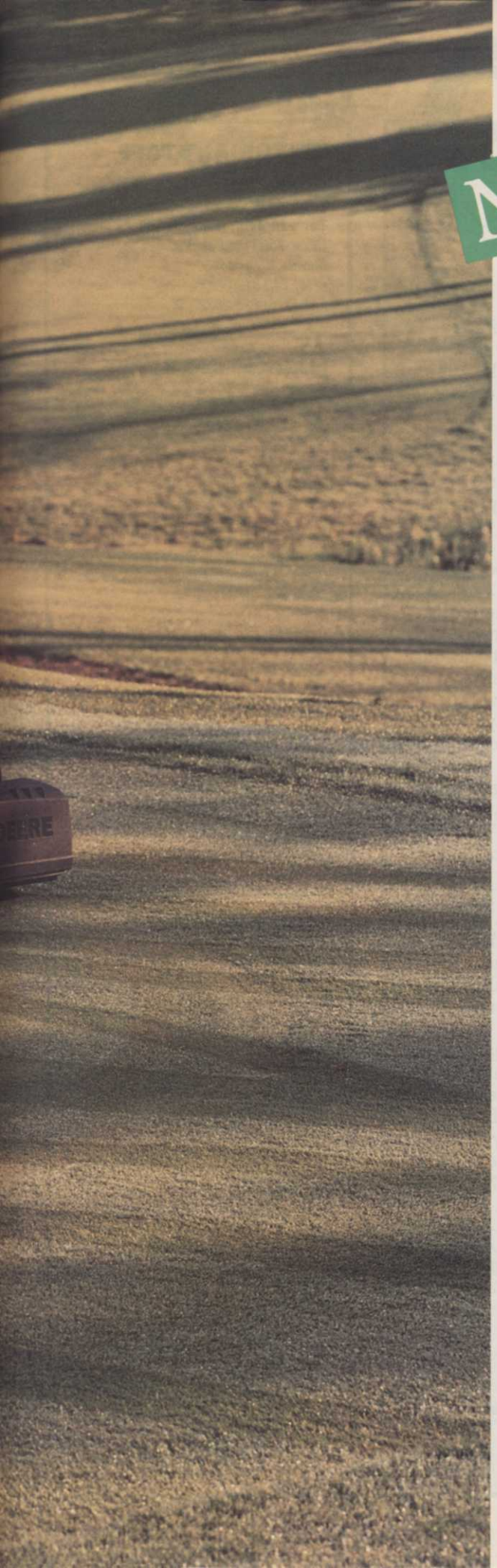


Now

# Mow two days for the price of one

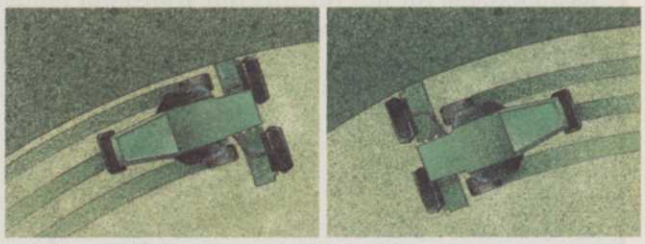
Offset cutting units. They are the key to this new mower's success. Meet the John Deere 2243 Professional Greens Mower. The first triplex ever to offer a head-on solution to compaction.

**Until now,** the built-in price you've always had to pay for triplex productivity has been increased compaction wear around the perimeter of your greens. That price just got cut in half.

**The 2243's patented offset design** allows you to spread machine weight over twice as much area. Simply change the direction of your perimeter cut each day, and your tires travel over completely different ground. Your greens get a welcome rest.

**And that's just the start.** The 2243 also features a liquid-cooled, 18-hp, gas engine; steerable cutting units; power steering; hydrostatic drive; ORFS hydraulic fittings and more.

**Call 1-800-544-2122** for the location of your nearest distributor. Or write John Deere, Dept. 956, Moline, IL 61265 for free literature. Because you and your greens deserve the best—and this is as good as it gets.



*Offset cutting units on the 2243 allow you to stagger your wheel tracks by simply changing your direction of cut.*

JOHN DEERE

Nothing Runs Like a Deere®

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# AS I SEE IT...

## Working within 'the system'

It's mid-summer. Temperatures in most parts of the country are frequently reaching into three digits. As mercury in thermometers rises, so do tempers. And you are faced with the annual question: How to save those most valued employees during this especially trying time of the year?

Dave Coyle has an answer.

Coyle is acting director of Cleveland, Ohio's Department of Parks, Recreation and Properties. He is responsible for 35 year-round maintenance workers at the 10 city cemeteries, plus summer help.

Coyle cites several steps he's taken in recent years that have not only kept employees happy, but increased their productivity.

**Dave Coyle**

"We started 'quality circle' meetings with workers from the Department of Urban Forestry," notes Coyle. "We saw a 43 percent increase in productivity by just listening to the workers." When an employee presented an idea that would increase morale or productivity, it was implemented immediately—no ifs ands or buts.

Coyle also says that working with appropriate labor unions is a way to avoid extra personnel problems. "We've joined hands with Laborers Union Local 1099 to manage people collectively to do a good job," he notes.

Each of the cemeteries has a supervisor who designs his or her own maintenance program, thus getting field people involved in management tasks and making their job less thankless. "It's worked very well for us," Coyle says. "With that comes pride of ownership. As a result, we have neat, dedicated workers who really enjoy their jobs. And if there's a problem, the supervisor takes care of it immediately."

Coyle notes that this system has also helped foster good relations with the denizens of neighborhoods near the cemeteries.

Some government employees at Coyle's level use "the system" as an excuse for not turning out well-kept landscapes. But Coyle has found the secrets: work within the confines of government; keep your employees' welfare foremost in every decision.

And this system-within-a-system works. Does yours?

Jerry Roche

**Jerry Roche, executive editor**

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*Dark Green, Drought Tolerant, Insect and Disease Resistant Turf... Naturally!*

## Citation II

- Contains a high level of endophyte that enhances insect resistance.
- Very good resistance to leaf spot, brown patch, crown and stem rust, tolerance to red thread.
- Rich dark green color with good mowing quality.
- Excellent heat and wear tolerance.

## Saturn

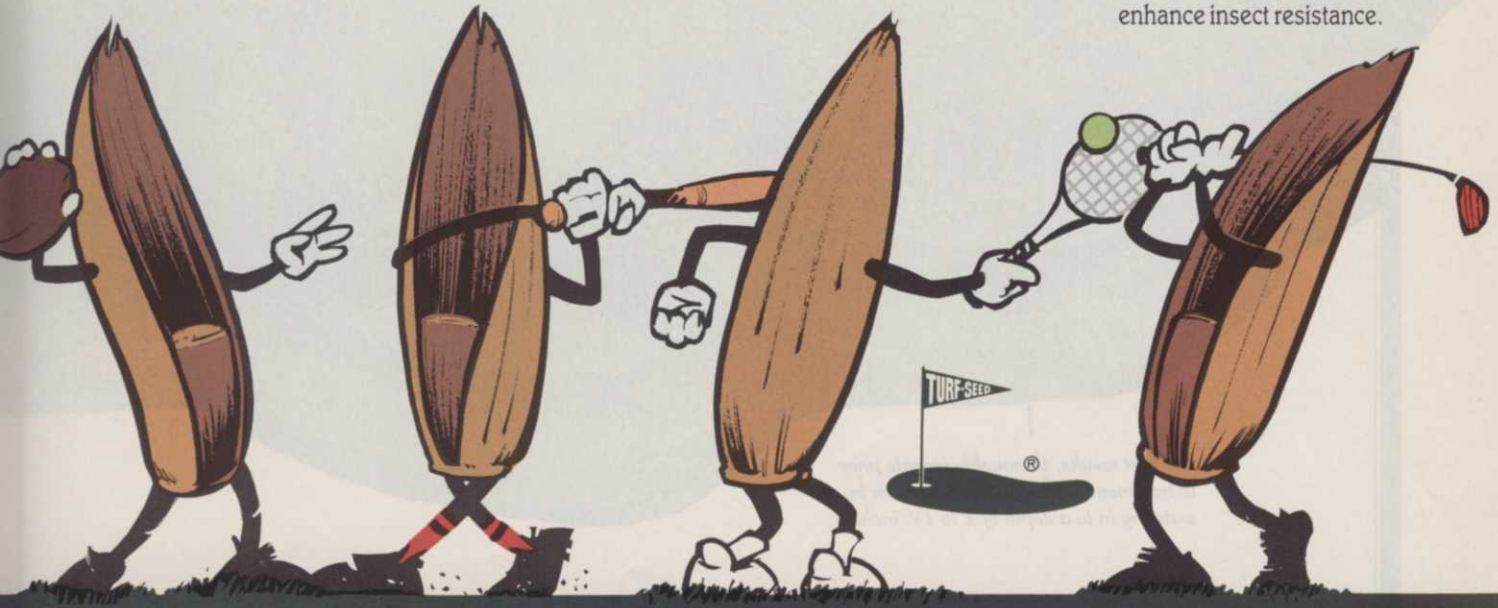
- The number 1 variety in the 1986 National perennial ryegrass trial.
- Dark blue-green colored low growing variety.
- Improved heat tolerance, and resistance to leaf spot, brown patch and stem rust.
- Very good performance in California overseeding trials.

## Charger

- Improved resistance to leaf spot, brown patch, stem and crown rust. Tolerance to red thread.
- Good performance under low fertility and improved color and growth under cool weather conditions.
- Early maturity and tested as 2HH.

## 246 Sunrye

- Very dark blue-green colored turf-type variety.
- Dwarfer growth habit than other varieties in overseeding trials in Palm Springs area.
- Improved resistance to leaf spot, brown patch, and stem rust.
- Contains a moderately high level of endophyte to enhance insect resistance.




**Turf-Seed, Inc.** PO Box 250 Hubbard, OR 97032 503-981-9571 FAX 503-981-5626 1-800-247-6910

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*For best results, thoroughly irrigate prior to treatment. Follow your application by watering in to a depth of 1 to 1½ inches.*

DYLOX and OFTANOL are Reg. TMs of Bayer AG, Germany ©1989 Mobay Corporation

# When you have grub control this effective, you have grounds to celebrate.

*DYLOX controls armyworms, bagworms, and stink bugs on your trees, shrubs, and flowers as well as controlling cutworms and sod webworms on your turf.*

*OFTANOL also controls billbugs, cutworms, chinch bugs, Hyperodes weevil, and sod webworms.*

*To identify grub populations, look for patches of wilted, dead or dying turf. Grub-infested turf has pruned roots which make it easy to pull back like carpet.*

Some of the most celebrated courses in the country turn to Mobay products for *grub protection*.

For preventative treatment, there's OFTANOL® Insecticide. It controls *grubs* longer than any other product available. Apply it in the spring before *grubs* show up. After all, spring rains and temperatures can mask a *grub* problem.

Or apply a pre-damage application of OFTANOL when *grub eggs* hatch and activity begins (usually right after a drought-breaking rain in the early fall). But only apply OFTANOL once a year. If you've already used it in the spring, treat with DYLOX® Insecticide.

Of course, if grub damage turns up, apply DYLOX followed by heavy watering. DYLOX controls *grubs* in as little as 24 to 48 hours.

For more information, contact your Mobay distributor or Mobay sales representative. They can help you make your turf look great. And that makes you look great. Which is cause enough to celebrate.

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GREEN INDUSTRY NEWS

JULY 1990, VOLUME 29, NUMBER 7

LANDSCAPE MANAGEMENT

CONFERENCES

# Lyme disease occurrence on rise across Northeast

TARRYTOWN, N.Y. — Last year, 7,400 cases of Lyme disease were reported to the U.S. Centers for Disease Control, 45 percent of them in New York State. This is a marked increase over previous yearly totals: 5,000 reported cases in 1988 and 2,400 in 1987.

Other high concentrations of the disease were found in Minnesota and Wisconsin.

"Lyme disease is the most frequently acquired of all vector-borne diseases in the continental U.S." said Dr. Joseph F. Piesman at a symposium held here in May. Piesman works at the Centers for Disease Control, Ft. Collins, Colo.

More than 200 public health administrators and disease control experts listened to findings of 12 leading research scientists from across the country.

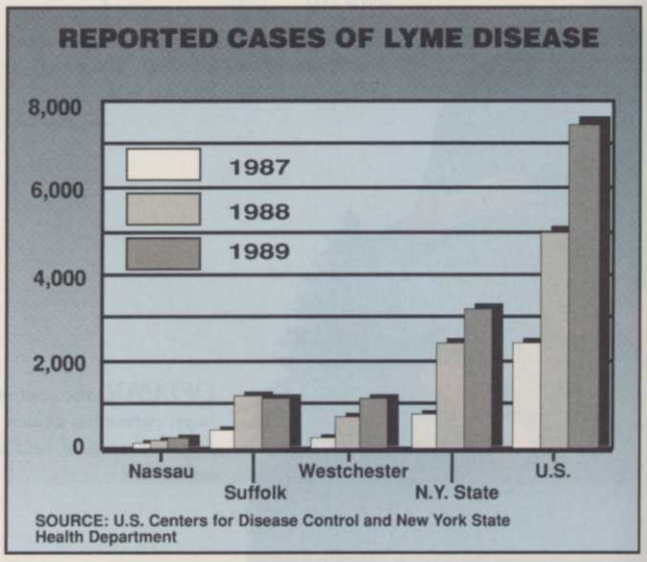
First identifed 15 years ago, Lyme disease has spread to 43 states.

Piesman identified four areas as major habitats for the deer tick: lawns, ornamental planting areas, ecotonal (transitional) areas which divide lawns from wooded areas, and woods.

Results from an August, 1989 survey of land around 66 properties in Armonk, N.Y., showed more than half of all nymphal ticks to be located in wooded habitats.

Piesman suggests homeowners put down a barrier such as mulch, crushed coral or pine needles to separate high and low risk areas.

The Lyme disease symposium was presented by New York Medical College under the sponsorship of Rhone-Poulenc Ag Company. Rhone-Poulenc manufactures the Chipco Sevimol and Sevin brands of carbaryl insecticides, both of which have proven effective in deer tick control.




According to Rhone-Poulenc, four tests conducted in New Jersey, Connecticut and New York using liquid applications of Chipco Sevimol and granular Sevin brand carbaryl insecticide showed effective control of adult and juvenile life stages of deer ticks.

Damminix, made by Ecohealth, Inc. has also been effective as a more "surgical" approach to controlling ticks. Cotton balls saturated with permethrin are placed around risk areas in cardboard tubes. Field mice then take the cotton for use as nesting material. The ticks feeding on the mice are controlled after the mice bring the cotton to the nest. The mice remain unharmed.

Dr. Andrew Spielman of the Harvard School of Public Health and Dr. Thomas J. Daniels of New York Medical College listed some common tick carriers: white-footed mice, dogs, cats,

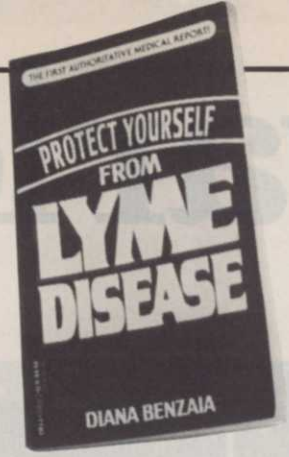
## Lyme disease: preventive measures

If you live in a wooded area or participate in outdoor activities within the range of the deer tick, the New York Medical College recommends the following:

- Wear light-colored clothing;
- Pull socks over pant cuffs;
- Use an insect repellent containing "Deet" to repel ticks;
- Make frequent body searches for the small nymphal tick.

If bitten by a tick, remove it immediately with fine tweezers. Grasp the tick as close to the skin as possible and, with a steady movement, pull it straight out. Apply an antiseptic such as alcohol to the tick bite to prevent secondary infection.

Do not apply mineral oil, Vaseline, heat or anything else to the tick. Send the tick to your local health department for identification or contact the Lyme Disease Center at New York Medical College: (914) 285-1700. □




**"Protect Yourself from Lyme Disease:" send $6.50 to Dell Reader's Service, P.O. Box 5057, Des Plaines, IL 60017.**

raccoons and squirrels.

Typical symptoms of the disease are a bull's-eye shaped rash, headaches, fever, chills, nausea, fatigue, muscle and joint pain and swollen glands.

Symptoms can worsen to include arthritis, nerve or heart disorders, meningitis, encephalitis and facial paralysis.

Brochures on Lyme disease are available from The Lyme Disease Center, New York Medical College, Valhalla, NY 10595.

*—Terry McIver*□

SEED INDUSTRY

# Buffalograss gets okay for production

HEALEY, Kans. — Sharp Brothers Seed Co. and the University of Nebraska have reached an agreement on worldwide production and marketing rights to the new generations of buffalograss.

The company will distribute what are described as "new generation cultivars" of the extremely drought tolerant buffalograss into all regions of the U.S., especially those areas where environmental and water conservation concerns are high.

"We feel this is an opportunity to provide the turfgrass industry with varieties of buffalograss which require low amounts of water and maintenance and yet perform as a beautiful, durable turf," says Steve O'Neill, turf division manager at Sharp Brothers.

According to Sharp President Gail Sharp, the first challenge wil be "to utilize these varieties not only as vegetative, but as seeded varieties also. Evaluations will be instigated immediately within our production facilities. We hope to supply seed from these varieties within the next few years."

Dr. Terry Reardon, turfgrass breeder from the University of Nebraska, says a turf-type buffalograss will allow the consumer to continue to have a nice lawn, park or golf course, but with significant reductions in demands on the environment, such as less use of water and control products. □

LAWN CARE

# *Brooks requests changes*

MARIETTA, Ga. — James R. Brooks, executive vice president of the Professional Lawn Care Association of America (PLCAA), has recommended to the board of directors that it reorganize staff responsibilities.

Brooks, with PLCAA since 1983, has requested his own title be modified as he concentrates more on membership development and trade show marketing.

"The lawn care industry continues to diversify," Brooks told the board, "and PLCAA needs to make a more concerted effort in identifying and meeting the business efforts of all types of companies, particularly the smaller operator." □

# SHORT CUTS

**CREEPING BENTGRASS SOD...**is still in short supply as demand for the cool-season species remains high. Seed Research of Oregon has an information kit for growers interested in producing high quality creeping bentgrass sod. Information contained in the kit deals with all aspects of high quality bentgrass sod production, from developing a proper rootzone mix to harvesting and shipping. The number to call is (503) 757-2663 or (800) 253-5766.

**INTERESTING 'DWARFS'...**Pickseed West, Inc., of Tangent, Ore. continues to emphasize low-maintenance, high quality cool-season turfgrass varieties, according to plant breeder **Dr. Jerry Pepin**. Newest "dwarf" varieties from Pickseed are LowGrow perennial ryegrass; and Shortstop, Crossfire and Mini-Mustang turf-type tall fescues. Shortstop was made available last year. Crossfire and Mini-Mustang will be available this summer from selected Pickseed regional distributors.

**TREE LEADER EXPANDS...**The Davey Tree Expert Co. has acquired Canadian Shade Tree Service, Ltd., of Montreal. Davey says Canadian Shade is the largest residential tree care company in Montreal. The Kent, Ohio-based company has other Canadian divisions in Ontario, Alberta and British Columbia.

**BIRD LOVERS LISTEN UP...**Landscaping with certain trees, shrubs or vines will have special appeal to birds, says **David Tatnall**, garden specialist with the University of Delaware. Tatnall says suitable tree selections are small-fruited crabapples; white pine and hemlock from the evergreen family; shrubs such as Japanese barberry and Tatarian honeysuckle bear. Virginia creeper is an ideal vine, Tatnall says, but hummingbirds are attracted to the large orange and scarlet flowers of the trumpet creeper, which should be used moderately, especially against structures.

**PROMOTING THE PROFESSIONAL...**is the goal of an advertising program initiated by the California Landscape Contractors Association. The ad encourages commercial clients to hire CLCA members for "the finest in landscape installation and maintenance." Public relations chairman **Richard Plaxo** says CLCA "wants to stress that when clients hire a member, they're assured quality results and professionalism." The ad is available to CLCA chapters; insertion costs are shared equally by CLCA headquarters and chapters.

# For a varie

QUALITY PICKSEED® TURFGRASS PRODUCTS

## Fiesta II
Perennial Ryegrass

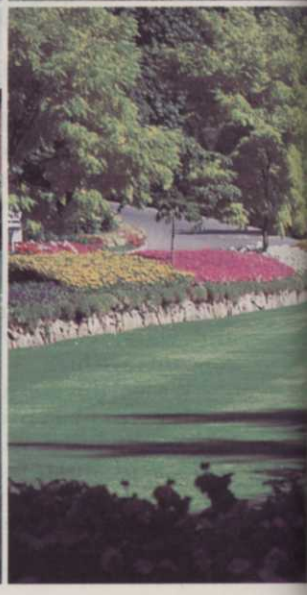
This advance generation turf-type perennial ryegrass is setting new standards for quality, color, and performance. Its dark green color, fine leaf texture, and environmental tolerance gives you beautiful and functional results, while its high seed count stretches your grass seed dollar. Use Fiesta II straight or in Futura 2000 where it is blended with Blazer II and Dasher II perennial ryegrasses. A genetically superior combination for perennial turf in the North and overseeding in the South.

## Banff
Kentucky Bluegrass

Banff is a vigorous dwarf variety that was discovered on the Banff Springs Golf Course in Alberta, Canada. There, Banff survived twenty years of continual heavy watering, repeated attacks from snow mold, and close mowing on a putting green. Just imagine what it could do for you. Banff establishes quickly and forms a disease resistant, cold tolerant, dark green turf.

## Touchdown
KENTUCKY BLUEGRASS

Since Touchdown's discovery by the late Tom Rewinsky on the National Golf Links of America on Long Island, this elite bluegrass has become the top choice of sod producers. Its aggressive growth habit and rapid establishment crowds out weeds and Poa annua while developing an even, dark green turf.



## MUSTANG
TURF-TYPE TALL FESCUE

Mustang is the tall fescue that looks like bluegrass. Its finer texture, darker green color, and wear and drought tolerance have made it the choice for sports field, sod, park, and home lawn use. Mustang is available straight or in TEAM – a three-way turf-type tall fescue blend that also contains Maverick II and Thoroughbred.

## Colt
POA TRIVIALIS

Colt is an Oregon produced variety that offers you domestic seed production benefits. It combines superior turf performance and turf quality with genetic adaptation to North American growing conditions. It is dark green, shade tolerant, disease resistant, and very winter hardy. Colt is a vigorous, low-growing variety that has excellent overseeding qualities.

## VICTORY
CHEWINGS FESCUE

For the fourth consecutive year Victory was the highest rated commercially available chewings fescue in the national Fine Fescue Trials. Victory is a low growing, shade tolerant variety that has possibly the darkest green color of any other chewings fescue. It exhibits superior uniformity and disease resistance, too. If you like picking winners, pick Victory.

# ty of reasons.

## CROSSFIRE
### TURF-TYPE TALL FESCUE

Crossfire turf-type tall fescue is the only strategy you need for battling a summer ambush of heat and drought. Crossfire is a lower and slower growing variety of tall fescue that exhibits a very dark green color. It combines improved heat and drought tolerance with outstanding turf quality to produce a dense and durable turf. Crossfire's high marks in overall performance during its initial evaluation proved it was ready for the field. Let Crossfire show you how to endure a long summer siege.

## SPARTAN
### HARD FESCUE

Spartan is a robust, advanced generation of hard fescue that is dark green, leafy, and persistant. It demonstrates excellent cold tolerance and creates attractive, low growing, low maintenance turf. Spartan mixes well with perennial ryegrass, Kentucky bluegrass, and other fine fescues. It is an outstanding component in many shady and low maintenance mixes suited for use on home lawns, parks, and golf course roughs.

## AMERICA
### KENTUCKY BLUEGRASS

America is a low maintenance Kentucky bluegrass that has a dense dwarf growth habit, dark green color, excellent disease resistance, and good shade tolerance. Perfect in mixes, America is ideal for golf course fairways, sod production, playing fields, and home lawns.

Pickseed also produces the following quality turfgrass varieties: Agram chewings fescue, Jasper creeping red fescue, Jazz perennial ryegrass, Alpine Kentucky bluegrass, Exeter colonial bentgrass, and National creeping bentgrass.

## SHORTSTOP
### TURF-TYPE TALL FESCUE

Shortstop is the little guy with big benefits. As its name implies, Shortstop is a slower and shorter growing variety of turf-type tall fescue. But don't let its stature fool you. Shortstop is plenty tough. It has heat and cold tolerance, disease resistance and is widely adapted. Shortstop forms a beautiful, dense, uniform turf of finer, darker green leaves.

## BRONCO
### Kentucky Bluegrass

Bronco is a very wide bladed Kentucky bluegrass that was developed specifically as a mix companion for turf-type tall fescue. While its texture and color gives it the appearance of a tall fescue, the comparison between the two ends there. Bronco is elite Kentucky bluegrass all the way. Its been bred to be less dense so it won't crowd out tall fescue and yet still aggressive enough to fill in and repair damaged areas quickly. That's what makes Bronco ideal for sports turf use.

Pickseed products are distributed throughout North America by quality seed suppliers.

**PICKSEED®**
**PICKSEED WEST Inc.**
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SUPPLIERS

## Lesco files suit against Echo and its distributors

CLEVELAND — Lesco Inc. has filed a suit in U.S. District Court seeking injunctive and other relief from Echo Inc. and its distributors to prevent them from breaching or interfering with its contract, in violation of federal antitrust law.

In the suit, Lesco said it obtained contractual rights to distribute Echo power equipment and introduced the line at its national sales meeting. However, Lesco said it was told later that it was no longer possible for Echo to sell products to Lesco because of coercion and threats from certain Echo distributors and dealers which encouraged Echo to breach its agreement and to restrain trade.

"We feel there's no substance in the lawsuit filed by Lesco," says Echo's Eugene Stanky. "We've been meeting with Lesco for the past month (May) in hopes of resolving this. We think there's just been miscommunication, but it takes two to solve a problem."

Lesco seeks to enjoin certain Echo distributors and dealers from coercing or encouraging Echo to breach its agreement, according to a press release from Lesco. The suit includes more than 50 defendants affiliated with the Echo distribution network, the announcement further notes.

According to the release, Lesco has yet to determine the full extent of damages as a result of the breach of contract, but is seeking damages and costs plus punitive damages of $20 million in each of five specific claims against Echo and the other defendants. □

## Honored

**SAN BERNARDINO, Calif. — Dr. Kent Kurtz, a member of the LANDSCAPE MANAGEMENT technical advisory board, won a special award from the California Association of Park and Recreation Commissioners, and a merit award from the California Park and Recreation Society. Dr. Kurtz received the awards at the 42nd California and Pacific Southwest Recreation and Park Conference in San Diego.**

LITERATURE

## Information on PVC available

WAYNE, N.J. — A new information package about various applications of polyvinyl chloride (PVC) in water and sewer pipe projects is available from the Pipe Resource Organization of The Vinyl Institute.

"PVC for All the Right Reasons" contains case histories of PVC pipe applications, testimonials from engineers and municipal water officials, and a list of Vinyl Institute members.

"Our goal is to provide accurate and timely information about PVC pipe to both current and prospective users and to communicate PVC's many advantages," says Dave Peters, chairman of the Pipe Resource Organization.

For more information, contact the Vinyl Institute: Wayne Interchange Plaza II, 155 Route 46 West, Wayne, NJ 07470; (201) 890-9299. □


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MUNICIPALITIES

## *Escondido planting program is aimed at improving air quality*

ESCONDIDO, Calif. — This city has launched an ambitious program to plant 5,100 trees within the city limits this year. The program is being implemented to help promote better air quality—a concern in this part of southern California—and to beautify the environment.

Two thousand of the trees will be given free of charge to residents to plant, and 3,100 additional trees will be planted by city workers throughout the municipal park system.

City Parks and Recreation Director Don Anderson says the general public would be given the necessary guidance to assure the health and stability of their newly-planted trees. For starters, residents receive a detailed instruction booklet when they pick up the trees at City Hall.

In addition, V.I.T. Products donated "Cinch-Ties" to the city so tree-tying devices would not have to be purchased. According to V.I.T. president Don Pagano, "This left more money in their arbor program budget so that even more trees could be purchased. This is our way to show that we care about the quality of life within our community."

**Don Pagano, left, donates Cinch-Ties to Escondido Parks Director Don Anderson.**

Cinch-Ties are positioned around the tree trunk and secured to lodge poles to promote stability and flexibility as the tree grows. For more information, contact V.I.T. Products at 300 Enterprise, Suite 0, Escondido, CA 92025; (619) 480-6702. □

CORRECTION

## Baldwin College has ornamental, turfgrass studies

TIFTON, Ga. — Abraham Baldwin Agricultural College here offers seven ornamental and turfgrass study courses leading to two-year Associate of Applied Science degrees.

According to Prof. Ed Seagle, the areas of study are: floral design, ornamental production, landscape management, golf/turf management, golf club management, commercial turf management and turf equipment management. Seagle, along with students William Dillard and Janna Waters, were inadvertently not identified in a photo recently. The original photo appeared on page 28 of the May issue of LANDSCAPE MANAGEMENT.

For more information on the college, write him at P.O. Box 8, ABAC Station, Tifton, GA 31794. □


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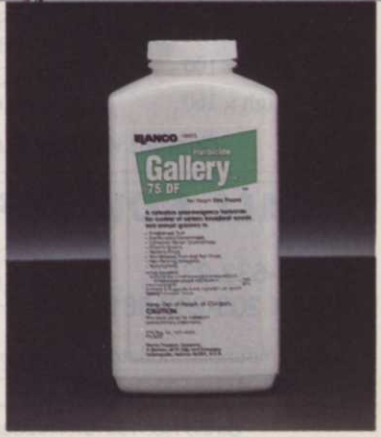


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# EVENTS

## JULY

**14-18: American Association of Nurserymen/Tennessee Nurserymen's Association Trade Show.** Contact: Dr. Paul L. Smeal, Virginia Polytechnic Institute, Blacksburg, VA 24061-5445; (703) 231-5609 or (703) 231-5445.

**18: Annual Nursery Field Day,** Virginia Beach, Va. Contact: Hampton Roads Agricultural Experiment Station, 1444 Diamond Springs Rd., Virginia Beach, VA 23455; (804) 363-3900.

**18: Facilities Management Workshops**, Davidson College, Davidson, N.C. Contact: Professional Grounds Management Society, 10402 Ridgland Rd., Suite 4, Cockeysville, MD 21030; (301) 667-1833.

**18: Maryland Turfgrass Field Day and Equipment Exhibit**, Cherry Hill Turfgrass Research Facility, Silver Spring, MD. Contact: Dr. Peter Dernoeden, Dept. of Agronomy, University of Maryland, College Park, MD 20742.

**25-27: ASPA Summer Convention and Field Days,** Ottawa, Ontario, Canada. Contact: American Sod Producers Association, 1855-A Hicks Rd., Rolling Meadows, IL 60008; (708) 705-9898. For special airfares, call (800) 535-1492.

**26: Facilities Management Workshop,** Ohio State University, Columbus, Ohio. Contact: PGMS, 10402 Ridgland Rd. Suite 4, Cockeysville, MD, 21030; (301) 667-1833.

EXPO/90

**29-31: International Lawn, Garden and Power Equipment Expo 90,** Louisville, Ky. Contact: Andry Montgomery & Assoc. at (800) 558-8767.

## AUGUST

**1: Park & Recreation Industry Expo,** Anoka Technical College, Bloomington, Minn. Contact: Dean E. Heng, (612) 559-6703.

**12-15: International Society of Arboriculture Annual Conference,** Sheraton Center Exhibit Hall, Toronto, Ontario. Contact: Jerri Moorman, 303 West University, Urbana, IL 61801; (217) 328-2032.

**12-16: National Conference and Exposition Offering Water Supply Solutions for the 1990s,** Phoenix Civic Plaza, Phoenix, Ariz. Contact: Conserv '90, 6375 Riverside Dr., Dublin, OH 43017; (614) 761-1711.

**12-17: Perennial Plant Association Symposium;** Hyatt Ravinia, Atlanta, Ga. Contact: Dr. Steven M. Still, 3383, Schirtzinger Rd., Hilliard, OH 43026; (614) 771-8431

**14: Associated Green Industries of Northeastern Ohio Summer Field Day,** Roemer Nurseries, North Madison, Ohio. Contact: Associated Green Industries at (216) 572-2784.

**15-16: Western Agricultural Chemicals Association Regulatory Affairs Seminar,** "Involuntary Exposure: Cause for Concern?," Hyatt Regency Hotel, Sacramento, Calif. Contact: WACA, 930 G. St., Suite 210, Sacramento, CA 95814; (916) 446-9222.

**15-16: Texas A&M University Field Day,** Dallas. Contact: Dr. Bill Knoop or Dr. Milt Engelke, (214) 231-5362; (214) 343-5011.

# Chisox get new home; Bossard gets new toy

CHICAGO — As one of the grand old major league baseball parks nears the end of her storied career, Roger Bossard awaits the birth of her offspring with bated breath.

Bossard, head groundskeeper at Comiskey Park, will be establishing a new field at the *new* Comiskey Park in a few scant weeks. He is, self-admittedly, "like a kid with a new toy."

The original park—home to the White Sox since 1915—lives her last days in the shadows of the huge new park, which grows with each passing day, on Chicago's South Side.

Bossard, a third generation groundskeeper, is having the new field built to his exact specifications. That includes a Bossard drainage system with tile on 15-foot centers and Du Pont stabilization fibers imbedded four inches under the soil surface.

"If this doesn't work, I'll be looking for a new job," says the 23-year Comiskey park veteran. Using a demonstration model, he shows visitors how the new field will allow one inch of rainwater to drain in just 26 minutes.

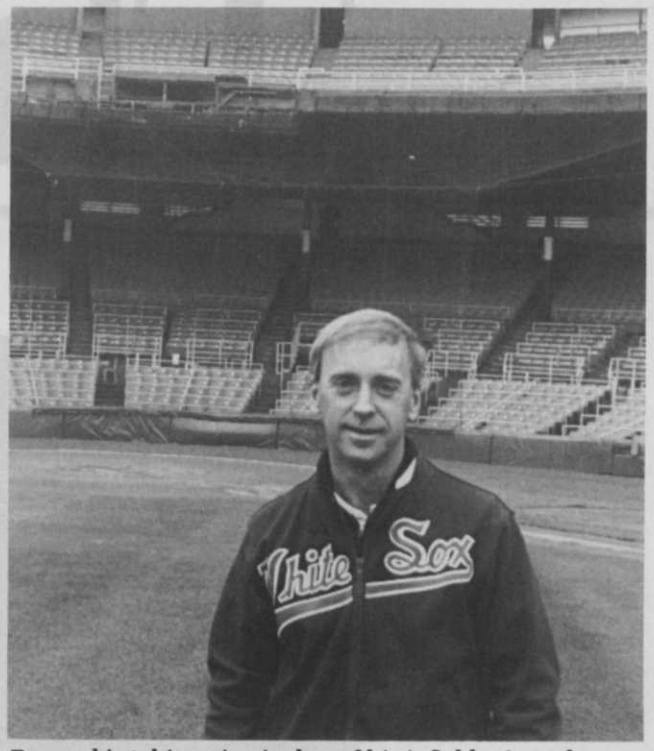
The new field will have a 0.25 percent slope—three inches for every 100 feet. The surface pitch will be six inches to the 100 feet. "I don't want to get rid of all my moisture," Bossard notes. "I want the plant to grow."

Bossard has been working closely with Dr. Hank Wilkinson of the University of Illinois, plus personnel from Evergreen Sod Farms and Hunter Irrigation Systems.

Clearly, drainage is of utmost importance to Bossard. But he offers these observations to other field managers, who may not have the resources of a major league organization from which to draw:

- When you're building athletic fields, think of the players first, then drainage.
- Use no less than 70 percent clay in the infield soil mix. The other 30 percent should consist of ¼mm bank or cut sand (like beach sand). He warns against torpedo (rough granular) sand.
- Add a calcine clay like Turface to the mix. "It's used by three-fourths of the major league clubs," Bossard notes. "This type of soil conditioner can cut labor man/hours by 30 percent, rain-outs by 50 percent and expenditures by 20 to 30 percent." He says seven or eight tons of

*continued on page 66*




**Bossard is taking nine inches of his infield mix to the new park: "Don't change the engine if the car's running good."**

## Personnel changes shake up PLCAA, STMA, GCA

The Professional Lawn Care Association of America (PLCAA) is looking for a new executive director, says to President **Rick Steinau**. A search committee hopes to present the final candidates to its Board of Directors at a mid-August meeting. Perrone-Ambrose Associates of Chicago has been retained to help the search, Steinau says.

To apply for the position, send resume and any supporting items to PLCAA, P.O. Box 37462, Cincinnati, OH 45222.

**Dale Keller** is new full-time executive director of the Sports Turf Managers Association (STMA). Keller is with R/K Communications Group, Inc., of Las Vegas, which was named the association's management firm.

Keller takes over for **Mark Hodnick,** who becomes treasurer.

STMA says Keller is working on a five-year plan to determine specific objectives and specific year-by-year goals, activities, and financial data to support the plan. Included will be plans for fund-raising, membership development, foundations, education, research, scholarship, promotion and award programs.

STMA's new address is: 1455 East Tropicana Ave., Suite 390, P.O. Box 98056, Las Vegas, NV 89183.

Elsewhere in the green industry, a founding member of the Golf Course Association decided to step down: **Curt Walker** served as executive director of the association for privately-owned public golf courses since 1984.

"GCA will always be home to me," says Walker. "Its financial strength today and its recent growth have assured the association a firm position as a major organization in the emerging pattern of professional golf management organizations."

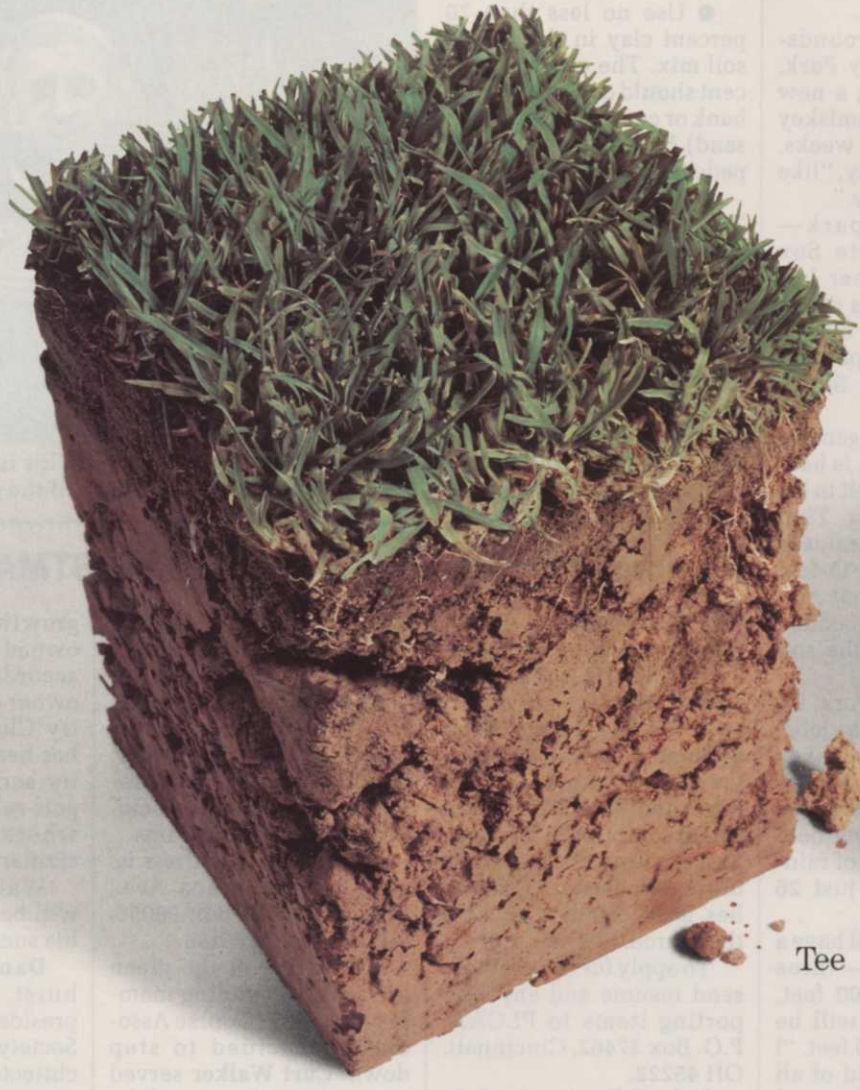
A key to the recent growth of the privately-owned public golf course, according to **Fred Tingle,** owner of Springdale Country Club in Canton, N.C., has been "GCA's role...and its acceptance by larger golf-related organizations where our interests are similar."

Walker's resignation will become effective once his successor is chosen.

**Dan Maples** of Pinehurst, N.C., was elected president of the American Society of Golf Course Architects (ASGCA) at its recent meeting in Pebble Beach, Calif. Maples, son of former ASGCA President **Ellis Maples**, has designed 36 courses from Georgia to Maine, as well as one in Spain.

Other ASGCA officers elected at the meeting are **Thomas Clark** of Wheaton, N.J. as vice president; **Arthur** Hills of Toledo, Ohio, as secretary; and **Gerald Matthews** of Lansing, Mich., as treasurer. □

# The Cor



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COVER STORY

# LIKE A GOOD NEIGHBOR

What you don't see on your Sunday drive down the interstate is the behind-the-scenes activity of the nation's roadside managers.

*by Terry McIver, associate editor*

On any given day, the typical roadside vegetation manager shoulders unseen responsibility for the safety and driving pleasure of the everyday traveler. And although the family out for a Sunday drive (if any families still take Sunday drives) won't see many roadside workers, the industry is becoming more visible in the light of environmental concerns related to pesticides.

For this article, we spoke with some of the country's best roadside vegetation managers and found:

- Most are concerned about how their work impacts the environment.
- They're willing to do what they must to save the environment, yet hope that compromises can be made.
- They take pride in the work they do that is less glamorous but nonetheless satisfying.

### Ohio programs varied

Dave Moellenkamp manages 3900 miles and 19 rest areas in northern and central Ohio.

Lately, he's been especially proud of ODOT's wildflower program, which currently covers about two acres of "his" roadsides. A number of states are planting more wildflowers, and Moellenkamp says that experiments have yielded some positive wildflower seeding developments.

"We're using the no-till method," Moellenkamp explains. "Originally, the planting process began by using a dethatcher to scarify the ground. We found it did a much better job than roto-tilling, and it eliminated a weed problem that was created with roto-tilling. But about halfway through the summer we ended up with a weed patch. The wildflowers did beautifully to begin with, but then the weeds took over."

According to Moellenkamp, a no-till seeder was the solution. It causes less soil disturbance—which minimized weed problems—and minimizes labor. In fact, the idea earned Moellenkamp an "Efficiency in Government" award from the state. The seeder, made by Wild Seed, Inc., of Austin, Tex., plants seed in a 42-inch-wide strip.

Moellenkamp has also conducted recent experiments with turf seed, and he now uses a Triplex seed mix for shady spots at rest areas.

The mix, consisting of Rebel, Bonanza and Olympic, is a narrow-bladed tall fescue that also holds up to lots of foot traffic.

### Caught in the middle

Moellenkamp says application of pesticides were cut back over the last six to eight years due to public opinion. But now they're hearing from another group: farmers.

"We're finding that the vegetation has to be managed, and we're going to have to start doing some selective

**Dave Moellenkamp of the Ohio DOT is surrounded by wildflowers, which have become a welcome sight for travelers along the Ohio interstate.**

As roadway traffic increases, erosion control becomes a more important duty in the manager's daily activity.

The Ohio DOT uses this no-till seeder to plant wildflowers.

# Setting standards in applicator training programs

A pesticide applicator training program in the final stages of development at Purdue University could become the national standard for the roadside management industry.

According to Harvey Holt, professor of forestry at Purdue, the program was initiated largely by chemical manufacturers interested in improving the image, efficiency and safety of roadside spraying.

The manufacturers approached the EPA and the Washington, D.C. cooperative extension service, says Holt, for guidance and suggestions about establishing a training curriculum that could easily cross state lines.

As an outgrowth of that discussion, the extension service—under the guidance of Bonnie Poli, national program leader of the extension service pesticide training—put together a national curriculum committee composed of state and landscape supervisors and people in charge of state programs.

The committee drew up an outline of standard material crucial to the performace of all roadside applicators.

Holt says the EPA and USDA have identified standards of certification for labeling, environmental protection and safety, applicator equipment calibration, laws and regulations. Some of the information is "core" material—that is, concepts applicable to every facet of the green industry. The "category" segment is composed of eight disciplines, including forestry, turf & ornamental, and agriculture. "These are well-defined groups of people using particular products in particular ways," says Holt. "They need information to do their job better."

The roadside applicator text includes segments on plant biology; characteristics of plant growth regulators and herbicides; equipment calibration and maintenance; general problems encountered in vegetation management; applicator safety and public relations. The public relations guidelines contain ways to communicate with the public and the media, fielding complaints, and crisis management.

The training program has been modified along the way. In a fine example of cooperation, various industry experts have offered suggestions for improvement.

"The roadside people in most states wear a large number of hats and have a wide range of responsibilities," says Bob Tatman, horticulturist with the state of Ohio, and member of the curriculum committee. "The training program covers all aspects of roadside work, starting from why we spray, and going up through calibration, public relations, and how plants are affected by different types of chemicals."

Tatman and others hope the program becomes the core training material for roadside applicators.

Dan Zay, a consultant from the Indiana DOT, says he's pleased with the support shown by many interested parties.

"In particular," notes Zay, "just the fact that everybody's behind it is important. The videos being developed along with the package will be important tools, educating other people within the department who may oversee herbicide programs or have some influence, yet who don't fully understand application."

Hoyt says the committee plans to present the final training program at the next annual meeting of the National Roadside Vegetation Managers Association in September 1990.

"We want the states to feel they can suggest corrections and additions," says Hoyt. "Our objective is to make it acceptable to the states and the certification and licensing agencies."

*—Terry McIver*□

**Bob Tatman: he and others hope the Purdue program becomes the core training program.**

spraying or it's (vegetation) going to take over the right-of-way," explains Moellenkamp.

"We're also finding farmers are becoming aware of the lack of spraying because the weed seeds are blowing into their fields. Before, (the farmers) were all for (reduced spraying); now that we've cut back, we're hearing things."

Most of the state's applications are contracted out, but ODOT crews will do some custom spraying on guardrail broadleaf weeds and cattails. Efficiency and safety are, of course, prime concerns.

"People are more aware of it, and we try to keep it to a minimum," admits Moellenkamp. "We use chemicals that are EPA approved; 14 of our people are licensed to spray, and they also attend training programs every three years to maintain their licenses."

Moellenkamp says the ODOT will soon begin using a computerized spray system designed by Cross Equipment of Albany, GA. The solutions are mixed as they are sprayed. This eliminates leftover solution, and makes for more accurate spraying.

Bob Tatman, horticulturist with the Ohio DOT, continues his own re-research with Ohio's wildflower program. His attempts to obtain native Ohio seed have been moving along slowly but surely.

"We've started our own nursery to grow native wildflowers, which should be much more competitive to vegetation," says Tatman. Other efforts include hand-collecting 65 pounds of seed last year. It's a bidens variety—a stick-like plant with a sunflower bloom, which Tatman hopes to plant on shale to control erosion.

### "Caution" signs are up

Dan Zay, landscape specialist for the Indiana DOT, sees a trend of caution in herbicide use as applicators look more closely at spray programs to be sure application is justified.

"In general terms," says Zay, "long-term residual chemicals are scrutinized more closely. If they hang around, there's potential for them to move. I think they give you less flexibility in your program."

Zay and the IDOT are considering centralizing operations more to make sure they have proper control and training among road crews.

### Applicator training paramount

Jim Erwin of Oregon's Douglas County Road Department makes training a priority when it comes to application of control products. Six full-timers and three seasonal people work in the county's noxious weed

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control program.

"Once a person gets a license through the state department of agriculture," says Erwin, "we feel it takes two years of training before we can send them out alone to apply herbicides. I've been a supervisor for over 15 years and never had a claim."

On the public relations front, Erwin says people in the county have become well-informed as to what's being done and which chemicals are in use. Still, more than 70 percent of Erwin's job involves personal contact with citizens.

"We try to be a good neighbor with everyone," says Erwin. "But at the same time, we want the public to realize we have a job that we have to get done. We can't jeopardize public safety over a difference of opinion. We try to treat every property owner as if we lived there and believed what they believe. We can't make everybody happy, but we try."

### Traveling south

Bill Johnson of the North Carolina DOT has changed the name of his department to the "Roadside Environmental Unit," to emphasize the closer link between the highway system and bordering habitats.

A new emphasis has been placed on sedimentation control, with closer adherence to a revised sedimentation law. The law was amended to include more "high quality" water areas. Standards are being changed dramatically to filter out more sediment in run-off water. The changes include golf courses and amenity areas.

*Safety and concern for the environment are the top priorities of today's roadside managers*

"We had been designing sediment basins to meet run-off requirements for a 10-year 'storm event,' which is the maximum storm you can expect every 10 years," says Johnson. "Now they require settling efficiencies in basins, and run-off capacity to handle a more severe 25-year storm event."

Johnson says rocks of various sizes, varied filitration rates, dams, stone traps and stone filter basins are much more effective means of erosion control than strict use of fabrics.

Johnson says the North Carolina DOT was approached recently by zoology professors from North Carolina State University interested in using right-of-way areas for habitat protection. Johnson says the task force would like to see certain areas be held in an "old field successional stage," composed of briars and brushy vegetation.

"The brushy zone is the best stage for these type of wildlife," says Johnson. Although the plans are still in the formative stage, there is expected to be a welcome reduction in mowing.

Johnson, like Moellenkamp, has made some changes in the type of grass seed used along roadsides, to require less mowing. "In warm-season areas, like to the east and south of Raleigh, we're adding centipede grass. In cooler-season areas, like Charlotte and Winston-Salem, we're adding hard fescues and a bluegrass mix to improve the turf species."

As Tatman says, the roadside vegetation manager "wears a number of different hats." The secret to success lies in doing it by the book, fostering efficiency among workers, the ability to adapt to adverse conditions, and the wisdom of experience. **LM**


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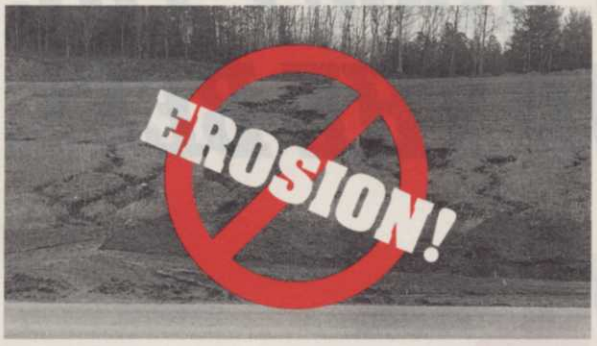


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*—Mr. Gary Q. Miller, President, Pittsford Tree and Landscape, Inc., Mendon, New York*

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Our 360 delivers 2.5 horses of raw power right out of the box. Which makes the 360 the most powerful saw of its size on the market—powerful enough to handle 14" to 16" bars with ease. It's a perfectly balanced, lightweight, high-revving machine with an anti-vibe system so well designed that it makes wood cutting positively enjoyable. Even the sound of its exhaust tells you this baby was built to perform.

### SMALL ON SIZE. BIG ON FEATURES.

The 360 works like a pro 'cause it's built like one. It's the only saw in its class with every one of these big pro saw features: A one-piece electronic ignition for fast, reliable starts; an adjustable clutch-driven automatic oil pump for better chain oil economy, a 2-ring piston for long-term performance; a 2-stage air filter for added engine protection; a captivated recoil spring for long service life; a replaceable Micarta rope guide for easy maintenance; a one-piece 4-bolt muffler for added quiet and a fully adjustable carburetor that's boot mounted to absolutely eliminate vapor lock.

### SAFETY FIRST.

Safety is enhanced by rear hand guards, safety chain brake, throttle interlock, low kick-back chain, a reversible low-kick sprocket nose bar and a rubber-coated chain catcher. All standard. The 360 also features a full 6-point anti-vibration system, so it's surprisingly comfortable to work with. It's less fatiguing. More productive.

### BUILT TO LAST.

Our new 360 is built to log the hours. All of which will really fly by. Because unlike bulkier saws, the Shindaiwa 360 is actually fun to cut with.

### AND SPEAKING OF STRENGTH...

Shindaiwa chain saws are backed by one of the strongest dealer networks in the country. So you'll always have the parts and service you need. When you need them.

### EVEN OUR GUARANTEE IS STRONG.

We're so proud of our new Shindaiwa 360 that we back each one with a 7-day money back guarantee: Try our 360 for one full week. If you're not convinced it's the best small saw you've ever used, we'll buy it back. No questions asked.
That's one tough guarantee.
But then again, it's one tough saw.

**shindaiwa®**

**WE SIMPLY MAKE THEM BETTER.**

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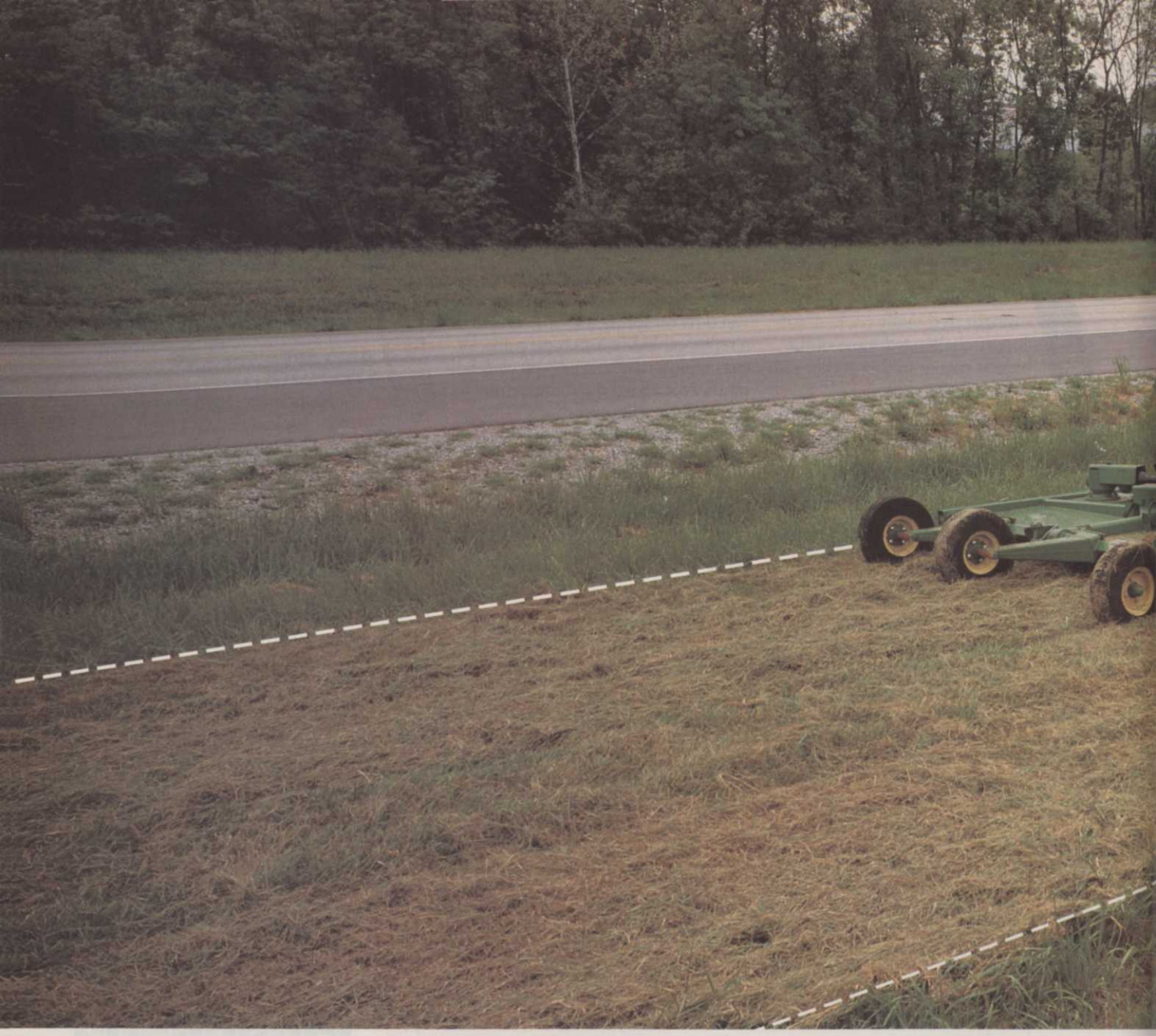

# Roundup® makes mowing more

**Manage more miles.**
Complement your mowing and other mechanical vegetation control methods with Roundup® herbicide. Roundup helps you get more done by making mowing faster, easier and more cost-effective.

Crews won't waste time dodging brush every time they mow when brush is controlled — once and for all — with Roundup. A trim and edge or bareground application of Roundup can also save you lots of time. Operators will spend less time backing up and maneuvering around bridge abutments, delineators, signs and guardrails. In fact, Roundup can actually eliminate labor-intensive string trimming or hand mowing.

And when you use Roundup in a Bermudagrass or Bahiagrass release program, you won't have as many weeds and vines choking your mowers. That means crews can run in a higher gear and complete circuits sooner, or even reduce the number of mowings required.

**More efficient use of money and manpower.**
Because Roundup saves you time, it can also cut labor and repair costs. Compare the effort and expense of mechanical brush removal with the ease and speed of one application of Roundup. Or use Roundup in a release program to eliminate a mowing cycle. Think of the money you could save on equipment maintenance.

Another way to keep costs down is to use Roundup instead of string trimmers. When crews no longer need to trim and edge constantly, you'll no longer face string trimmer repairs. And you can channel that manpower into actual road maintenance.

**More peace of mind.**
No matter how you use it, Roundup can help you increase sight distances

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# efficient, any way you cut it.

and improve motorist safety. Furthermore, this non-residual herbicide will not wash or leach in the soil. It binds tightly to soil particles and stays where you apply it. So you can streamline your program with confidence.

Find out how Roundup can lower your overall vegetation management costs by making your program "mower" efficient. Call:

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Mowing crews save time and effort by treating brush with Roundup.

Use Roundup to release desirable turf and prevent erosion.

Imagine not needing to do string trimming/hand mowing.

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# BUILDING SAFER ATHLETIC FIELDS

Careless planning, construction, or maintenance of a playground is an invitation to an accident and lawsuit.

*by Jim Leatzow*

So many potential liabilities are created by athletic field design, construction and maintenance that you need to look at each separately to understand them all.

The first liability risks belong to every member and element of the design team. To avoid liability, designers must consider factors such as soil suitability for specialized turf, irrigation, drainage, equipment specification, lighting, plant material in common areas, fencing, signage, training surfaces, traffic and pedestrian walkways.

The second liability exposure arises during the construction, when the designer's plans are implemented.

Thirdly, the landowner has the final responsibility for an athletic field and the activities exercised on it.

In today's litigious society, the suing party (plaintiff) will attempt to enjoin as many of these original parties involved as possible in order to create a "deeper pocket."

### The design stage

The most basic design must begin with an examination of the specific soil. It should be tested by a laboratory to determine if it will support sufficient cushioning material (turf) to keep the field safe.

Drainage is also a very important aspect of the design. If you end up with standing water on a field, plant material cannot survive.

Depending on the field's use, it may be critical to include a crown to enhance water run-off.

Also, specify hardy turf that can withstand the rigors of a sports field environment.

When a sport field has a "tot lot" adjacent to it, it is critical to use the specified equipment, which has been in use for quite some time and proven itself to be safe for children's play.

### Cushioning material

All areas, be they tot lots or sport fields, require cushioning material. Specify future maintenance, including specific manufacturer's equipment maintenance instructions.

Irrigation and lighting are also potential liability problems. For example, if the irrigation system is improperly designed, it might not provide sufficient water flow and result in bare spots. Or perhaps the sprinkler heads clog easily or stay in an upright position. Compacted soil around sprinkler heads requires the property owner to keep refilling the soil around it. The designer should include this

# THE DEEP POCKET THEORY IN PRACTICE

A few years ago, a young mother brought her 18-month-old son to a neighborhood park. She encouraged the child to climb up a slide, even though it was typically used by older children. Unfortunately, the small child fell from the top of the ladder, hit his head on hard, compacted ground and remains forever a slow learner.

The mother ultimately sued the park district (which owned the property), the contractor (who installed the slide a decade earlier) and the manufacturer of the slide.

The litigation was long and extremely costly before the jury ruled in favor of the plaintiff. The judgement? The three parties were ordered to pay approximately $3 million apiece.

Before you get angry about this case, or perhaps even dismiss it as a fluke, you should realize that similar cases are frequently replayed in our court system.

The problems that cause these kinds of claims to happen do not have simple, one-line answers. But it is not sufficient to throw up our hands in defeat and say, "We live in a litigious society, so what can we do?"

In the above case, there was a maintenance issue pertaining specifically to a lack of cushioning material under the playground equipment. If more thorough maintenance steps had been taken, it's likely that the award would have been substantially reduced, if not nixed altogether.

Still, we're victims of the "deep pocket" theory, which says, in effect, that an injured party has the right to recovery regardless of who is at fault. This is a reality; the only way it's going to change is through a grassroots effort to achieve tort reform.

The public needs to understand that it is not the faceless, "rich" insurance companies that are paying out these large awards. The monies paid in cases like this translate into higher premiums for every kind of insurance available.

*—Jim Leatzow*□

**Compacted, bare ground and the injuries resulting from it primarily affect the landowner, who has final responsibility for a field after it's constructed.**

issue in their specifications. Also, make sure the lighting is sufficient and provides adequate security.

### Prime firm

The "prime" design firm is the one that lines up subcontractors for specific work. The prime firm can and will be held responsible for the deficiencies, real or merely perceived, of every subcontractor working under it.

If the prime design firm hires subcontractors without verifying that they carry their own professional liability insurance, then the prime can expect to be called upon to defend any litigation that comes about as a result of their subcontractors' work.

When construction begins, the insurance exposure becomes one of a general liability nature. Exposure does not begin until the public begins using the design in its final form.

### Ample security

It is important to make sure that adequate protection is implemented to keep the public from gaining access to the construction site. Signage, as well as barriers, may be needed to prevent kids from gaining access to equipment or materials. On a large project, security may be needed to protect the facility from uninvited guests.

It is especially important to make certain that adequate fencing and appropriate signage are used to keep unwanted guests out of areas that are inherently dangerous and to provide adequate fencing for spectators to keep them from harm. Fencing takes on a critical dimension when athletic fields are placed close to or adjacent to roads and other areas of vehicular traffic.

Exactly who is responsible for security ought to be addressed in the contract and work agreements between the appropriate parties.

### Maintenance responsibilities

Once the athletic field has been constructed, accepted and turned over to the landowner, a new set of exposure to risk begins.

The landowner has a legal duty of care to provide five essentials to the public. The property owner must:

**1.** Keep the premises in repair;

**2.** Inspect the premises to discover hidden or obvious hazards;

**3.** Remove those hazards or warn the public about their existence;

**4.** The owner must anticipate typical uses and activities by the public and take reasonable precautions to protect the public from forseeable dangers;

*continued on page 32*

**5.** Conduct operations on the premises with reasonable care for the safety of the public using the facility. Most claims concerning athletic fields involve a lot of finger-pointing, usually because there are so many parties involved. The plaintiff (injured party), construction firm and property owner may all attempt to show that faulty design in some way contributed to an injury. The design team may attempt to show that the facility was not constructed as originally designed.

The property owner may be attacked for failing to provide adequate maintenance, cushioning material, and routine inspections of equipment and facilities.

The most important step in reducing liability exposure begins when the contracts and work agreements are signed by all parties.

The documents should be extremely specific about who is responsible for what. Furthermore, the parties should include expected or anticipated maintenance schedules (it is not unreasonable for the design team specialists to inform the property owner of future maintenance needs).

The designers should make periodic observations of the facility during construction. This important practice can make a tremendous difference in negating potential lawsuits after a project is built.

When choosing plant material, keep the users of the field in mind. It would not make sense to use sharp, thorned plants if even the most remote chance existed of a youngster running into it and getting hurt.

### Deep pockets?

The willingness of the public to perceive us as "deep pockets" and grant injured parties huge awards is one of several issues that plague the insurance industry. These issues will remain until the public understands that we all lose when outrageous monetary awards are granted.

You can and should protect yourself, especially on projects that ultimately involve children at play. The work agreements, sufficient observation during construction, competent participants in the project and adequate insurance should provide protection to you and the public. **LM**

Jim Leatzow is an insurance agent specializing in green industry matters. His office is located in Glen Ellyn, Ill.

## Liability poses major challenge

Whether justified or not, many of today's liability lawsuits are directed at the maintenance and care of the facilities, and ultimately at the individuals responsible for that maintenance.

I recently met with two different attorneys who asked me to serve as an expert witness on two separate cases. One attorney is representing a private school where a soccer player supposedly stepped into a depression during a game and severely damaged a knee. The second attorney represents a private corporation with recreational facilities. An employee, who was playing in an organized softball game, claims to have broken an ankle while running around second base after tripping in a hole.

### Eyeing a settlement

Both of these episodes occured in 1985. One will go to trial in 1990, the other in 1991. The plaintiffs' goal is to prove that the facilities were poor and that the maintenance staffs were negligent in performing their duties.

We all know that it takes money to maintain a good turf. Administrators who withhold needed dollars from landscaping need to understand that the money paid out for just one lawsuit that goes against your facility could purchase an abundant supply of maintenance supplies for many years.

Possibly 90 percent of athletic field problems are soil-related. A professional who has knowledge and expertise in the field of soil science is invaluable in the planning and construction of athletic facilities.

Knowledge of soil modification and management, drainage and irrigation are essential to the success of an athletic field. Most severe injuries occur on hard, compacted surfaces with a sparse turf cover. A well-maintained natural grass turf with correct soil composition provides the athlete forgiveness.

### A useful tool

The Clegg Impact Testing Apparatus is a tool that is assisting researchers in assessing the hardness of athletic field surfaces. It's proving to be extremely valuable by calling attention to potential problems.

The lower its reading, the softer the surface. An athletic field that is properly watered, fertilized, aerified, mowed and with a firm but resilient surface may have a reading between 30 and 50. Good synthetic turf surfaces may have readings averaging between 80 and 90 or more.

When used by a competent technician, this tool has the capability to convince administrators to at least consider correcting a situation before it is too late.

### Establishing standards

A recent inspection of some athletic fields in the Los Angeles area revealed some extremely high readings, especially where no turf cover was present.

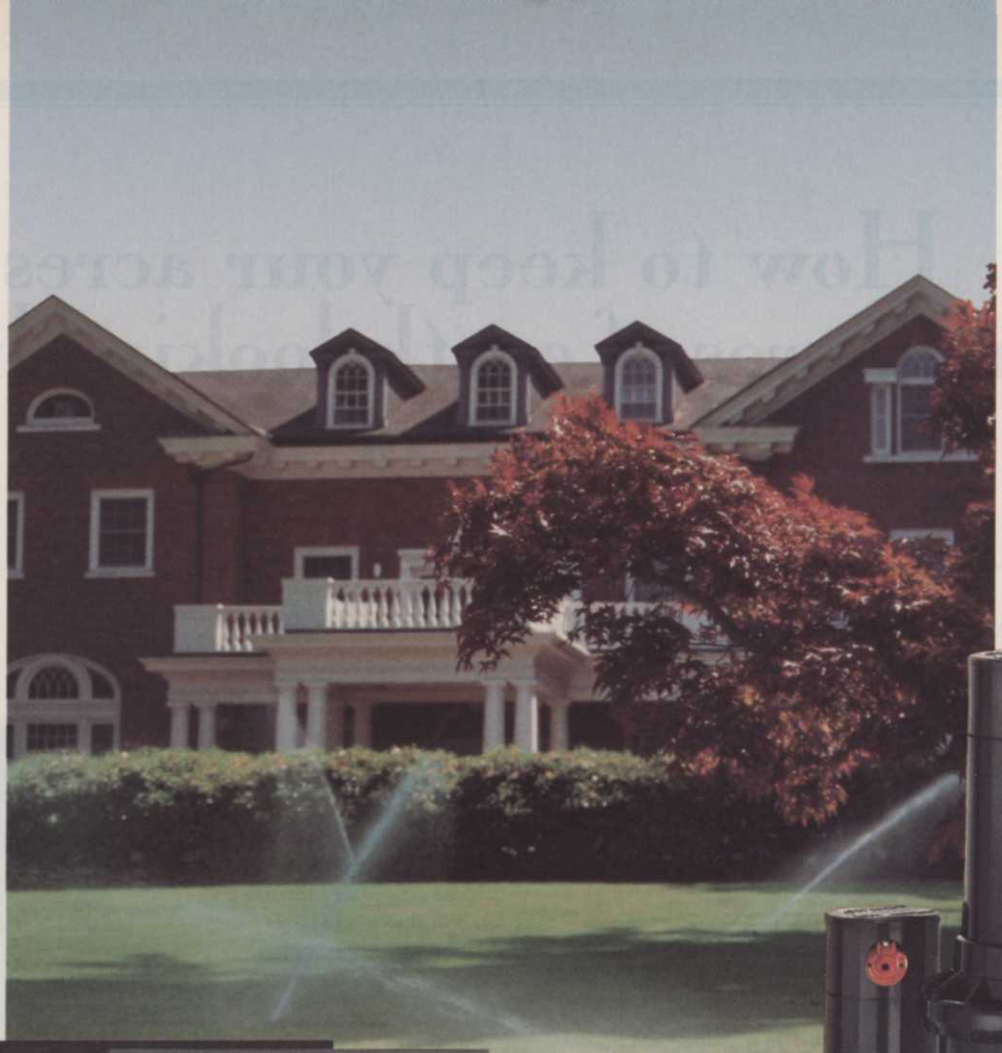
Surfaces we expected to be hard, such as the top of sprinkler heads and the running track surrounding a football field, had readings of 270 or higher. However, we were sorry to find compacted, bare areas in the center of two local football fields with readings between 160 and 180.

If an injury occured on a field with high readings like the ones mentioned above, a subsequent lawsuit could lead to a large settlement for the plaintiff.

Negligence is much more difficult to prove if we progress toward improving our facilities.

—*Kent Kurtz*□

Dr. Kurtz has been a professor in the Ornamental Horticulture Department at California State Polytechnic University and is an editorial advisor to LANDSCAPE MANAGEMENT.



# Hunter® SPRINKLERS

## TOTAL QUALITY

From the day inventor Ed Hunter founded the company, Hunter Industries has been a research and development-driven manufacturing concern dedicated to producing the most advanced and reliable irrigation products available.

Every product we make is constantly being improved. No quality improvement project is ever finished, and the goal of perfection will never be realized. If that seems like an exercise in frustration for us, just think what it must be like for the imitators that copy our products. Even when they do a good job of it, they are only doing what Hunter used to do.

At Hunter we are committed to Total Quality, and to facilitate that commitment, we have recently designed and built a computer-monitored sprinkler testing laboratory that is one of the most sophisticated irrigation product evaluation facilities in the world. It is capable of performing evaluations and making distinctions that were not measurable as recently as two years ago.

What this means to the irrigation professional is that the Hunter sprinkler you use this year will perform even better than the Hunter sprinkler you used last year. Count on it.

**G-Type Sprinklers**
PGS, PGP, PGH

**New G-Type Nozzles**
Greater Versatility
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# How to keep your acres and acres of earth looking like a little slice of heaven.

Adopt a Mobay fungicide program, and start producing turf that's a cut above.

Start with BAYLETON® Turf and Ornamental Fungicide. It has an unequaled reputation for stopping *dollar spot* while giving you broad spectrum disease control.

In addition, BAYLETON eliminates costly multiple applications. You see, it works systemically, entering the plant and working from the inside. Since BAYLETON won't wash off, it lasts longer.

For *leaf spot,* treat with DYRENE® Turf Fungicide. Quite simply, nothing works better. Plus, the flowable formulation of DYRENE gives you longer residual control than regular contact fungicides. And that adds up to a lower cost per day of control.

Best of all, both BAYLETON and DYRENE have a long history of unmatched performance.

For more information, contact your Mobay distributor or Mobay sales representative. They can set you up with a fungicide program that'll help you keep your acres looking like a little heaven on earth.

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**Dyrene**

*Treat your fairways with BAYLETON and DYRENE. It keeps your customers from tracking disease up onto your tees and greens, and raises the overall quality of your course.*

*Apply BAYLETON for broad spectrum control on a wide variety of ornamental plants.*

*Plant turf varieties that resist diseases in your area. Apply a balanced fertilizer. Aerate, irrigate, and dethatch periodically.*

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*In addition to dollar spot, BAYLETON prevents summer patch, anthracnose, and other major turf diseases.*

*DYRENE prevents brown patch and leaf spot with excellent residual control.*

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**Expo '90 will feature an additional four acres of outdoor demonstration area. The highly anticipated event is July 29-31 in Louisville.**

# EQUIPMENT'S DAY IN THE SUN

The most impressive display of turf equipment ever assembled awaits visitors to the annual OPEI Expo in Louisville, Ky. Here are some of the innovative machines to be showcased.

Ask most people what comes to mind when they think of Louisville and they'll probably say Dixieland jazz, paddlewheel boats or college basketball. But for landscape equipment manufacturers and dealers, Louisville means equipment. Lots of equipment.

And this year is no different. July 29-31, more than 500 companies will take up 280,000 sq. ft. of space inside the Kentucky Fair & Exposition Center and more than 14 football fields outside. Their wares include the latest innovations in mowers, irrigation equipment, engines, chain saws, garden tools, snowthrowers, tillers and a variety of other related equipment, products and services for the outdoor leisure and power equipment industries.

## More commercial

Expo '90's outdoor facilities will be expanded by four acres to accommodate the rapidly growing commercial equipment market. "Expo has always mirrored the trends in our insustry," says Dennis Dix, executive director and chief operating officer of the Outdoor Power Equipment Institute, Expo's sponsor. "The industry is growing rapidly in the commercial area."

Warren Sellers, Expo '90 show director, said there were 185 percent more people who registered as landscapers and commercial mowing contractors at Expo '90 than at Expo '88.

Three years ago, the OPEI tried a trade show called the "Pro Show," which was separate from the OPEI Expo. Although that particular idea didn't work, the OPEI didn't give up hope of reaching the commercial market—not by far.

# Woods makes the grade... the commercial grade, that is.

Since our introduction of the first tractor powered rotary mower in 1947, customers have consistently awarded our equipment top grades for innovation and reliable performance.

Now we've applied our engineering and manufacturing expertise to an expanded line of commercial turf maintenance equipment. From the design stage right through component specification and assembly, these products are in a class by themselves.

**mow 'n machines™**

Zero turning radius mowers in five tractor sizes with mowing decks from 44" to 72".

**Landscape Rakes**

Seven rugged model series in 6 ft., 7 ft. and 8 ft. lengths for tractors rated up to 60 hp.

**Walk-Behind Mowers**

Smooth operating hydrostatic drive mowers with cutting swaths from 36" to 61".

**Booth #2611**
**Louisville Expo**

*Isn't it time you moved to the head of the commercial grounds maintenance class with Woods professional equipment? For more information contact your Woods dealer or write today to Woods, Dept. LM, Oregon, Illinois 61061.*

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Division of Hesston Corporation

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"There was enough interest among Pro Show advertisers that the OPEI experimented and came up with this demo area idea," notes Nic Smokey, advertising director at **Tecumseh Products**.

### Manufacturers happy

"It makes sense," says advertising manager Jack Steinhour of **Woods/ Hesston**. "The commercial market is bigger than the consumer (homeowner) market, so this is probably a good move."

The show's indoor/outdoor venue sets it apart in the eyes of many manufacturers as well. "This is the premiere show as far as commercial equipment is concerned," says Dave Buchanan of **Jacobsen Division of Textron**. "The fact that it's grown as much as it has in the past few years is testimony to that. It's a very good forum for getting your product in front of the dealer and landscaper, so it's a very important show for anyone who wants to be a player in the commercial market."

Jacobsen will show off its new 21-inch rear-bagging commercial mower, its Turfcat T422D four-wheel drive machine, the Crew King floating-deck rotary mower, "plus a few surprises," promised Buchanan.

Howard Day, vice president and sales manager at **Yazoo**, concurs.

"I see the (commercial) market growing, and we are changing some of our methods to reflect that growth," he says. "We're strong in that area and plan to get stronger."

### Growth is good

**Scag** has, so to speak, all its eggs in one basket: the commercial market. And that philosophy is bearing fruit.

"Our growth has been very good," says vice president and general manager Jerry Bailey. "We've even managed to stay ahead of the market's growth rate."

Scag will introduce zero-turn-radius walk-behind and riding mowers, and will have the rest of its equipment available to OPEI attendees.

Ralph Parsons is owner of **Parsons & Son**, which owns Micro-Mower, a manufacturer of attachments for 15 to 35 hp compact tractors.

Micro-Mower will be displaying two small-arm mowers for smaller tractors. The 92.5, with a 92.5-inch reach, and the 135, with a 135-inch reach. They're working on a small, tow-type three gang flail mower, but it's unlikely it will be available by the OPEI show.

"It's a very attractive show for us," says Parsons, "though it's an expensive show too. It's good because of the number and type of person we reach."

Parsons says Micro-Mower products fill a niche because they work as an attachment to compact tractors, allowing landscapers to take full advantage of equipment that's already in existance.

"I'm optimistic about the commercial lawn equipment market," Parsons adds, "because people need to keep up the appearance of physical facilities. The type of equipment we offer will allow them to do that while taking better advantage of equipment they probably already own."

**Ransomes** will take advantage of the new commercial demo area to exhibit "some of our larger riders and turf equipment," says communications director Maria Large. "We'll be

# You can get more powerful grub control than Chipco® Mocap® 5G.

# But it gets lousy gas mileage.

It's also tough to putt around. Fortunately, there's an easier solution, because the best grub control you can buy comes in a bag: CHIPCO® MOCAP® brand 5G pesticide. In fact, studies at a leading university show that CHIPCO® MOCAP® brand 5G delivers up to 97% effective control of white grubs. Plus, superior control of chinchbugs, sod webworms, bluegrass billbugs, black turfgrass Ataenius and mole crickets. And, you can use CHIPCO® MOCAP® brand 5G pesticide with confidence on nearly all types of turfgrass, including Bent, Bahia, Bermuda, Centipede, Fescue, Kentucky Bluegrass, St. Augustine, Zoysia and Perennial Rye species.

Need another reason for choosing CHIPCO® MOCAP® brand 5G? Then, consider this: CHIPCO® MOCAP® brand 5G provides this outstanding control for up to five full weeks. That saves time, trouble and money. So, let the Army worry about gas mileage. Get the most effective grub control money can buy with CHIPCO® MOCAP® brand 5G pesticide. Available at your turfcare chemicals supplier today.

**Chipco® Mocap® 5G**
Brand Pesticide

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able to show a larger variety than ever before, including our turf renovation products."

Tecumseh will be taking a "getting-to-know-you" approach. On display will be products from the company's Tecnamoter Division, which manufactures Italian engines that are being shipped to the U.S. Its lines of X-L engines and possibly a complete new line of heavy duty engines will also be demonstrated.

Woods will have its riding mowers and intermediate walk-behinds on display. "Our machines are strictly for large-area mowing," notes Steinhour.

### Targeting markets

**Teledyne Total Power** finds the commercial demo area especially suited to its marketing tactics.

"Our target market has always been the professional, the person who uses engines eight hours a day, six days a week," says director of OEM sales Art Porter. "And it would be nice for that end user to demand our power. This is an opportunity to get that message out."

Teledyne will display its full line of Wisconsin Robin engines.

**Bunton's** Mike Packer, whose company will be displaying its complete line of walk-behind, self-propelled units, sees the commercial market growing at a much faster pace than the home market.

"It's been an upward trend for the past five years. The homeowner market simply isn't growing at a double-digit pace like the commercial market.

"Louisville is an especially good show for us," he adds, "because of the amount of distributors and dealers there."

Packer predicts that in the coming decade landscapers will see increasingly sophisticated equipment that is more productive, yet costs the same or less.

### Expanded lines

Meanwhile, **Giant Vac** is enjoying the fruits of an expanding product line that will include mulching mowers in the future. At Louisville this summer, however, it will demonstrate outfront mowers from 36 to 60 inches, commercial all-welded push mowers 19 to 21 inches, thatchers, leaf blowers and truck loaders.

"We've added new products that have strengthened us," says Giant Vac president Herman Diehl. "This year, buyers are cautious spending money, but with the added products we're doing well."

While Jean Evans, secretary treasurer of **Magic Circle**, in Coatesville, Ind., is not sure what exact models will be on display in Louisville, she is sure that the Louisville show is one not to be missed.

"Its a very good show for us because it's where you get a large audience of dealers and distributors, plus quite a few landscapers," says Evans.

Sure to be included in Magic Circle's display are Dixie Chopper's ZTR (zero turning radius) models. They've developed a new drive system and filed a patent for their all-hydraulic, no chains mowers.

Evans notes that every year her company "grows a little bit more."

As for future trends? "I see zero-turning-radius mowers as a definite trend that's going to take over," says Evans. "The idea and number of companies pursuing it has grown tremendously over the past 15 years. Some people continue to hang on to the tractors, but they're becoming fewer and fewer."

**Steiner**, which positions itself at "the top of the line" of consumer equipment, is rapidly expanding—with its dealers—its commercial line. According to company president Bill Mason, commercial sales is now one third of total sales. He says landscapers will have a chance to use two-wheel drive outfront and four-wheel drive articulated Steiner mowing units.

**Goossen** Industries is touting its Chopper bale-chopper for mulching, a Vac-N-Load system and a Rake-N-Vac. Though the company markets primarily to cities and municipalities, notes spokesman Lawrence Vitosh, it will also be "leaning more toward the commercial market."

**Yamaha** is planning to inundate the OPEI show with its full line of trimmers, brush cutters, blowers, edgers and more, says marketing coordinator Charlie Sovacool. "Most of our products are geared toward commercial users, and it's a competitive industry. We're just trying to carve our niche," he notes. **LM**

*'It's a very important show for anyone who wants to be a player in the commercial market.'*

*—Dave Buchanan*
*Jacobsen Div. of Textron*

## More equipment at Expo '90

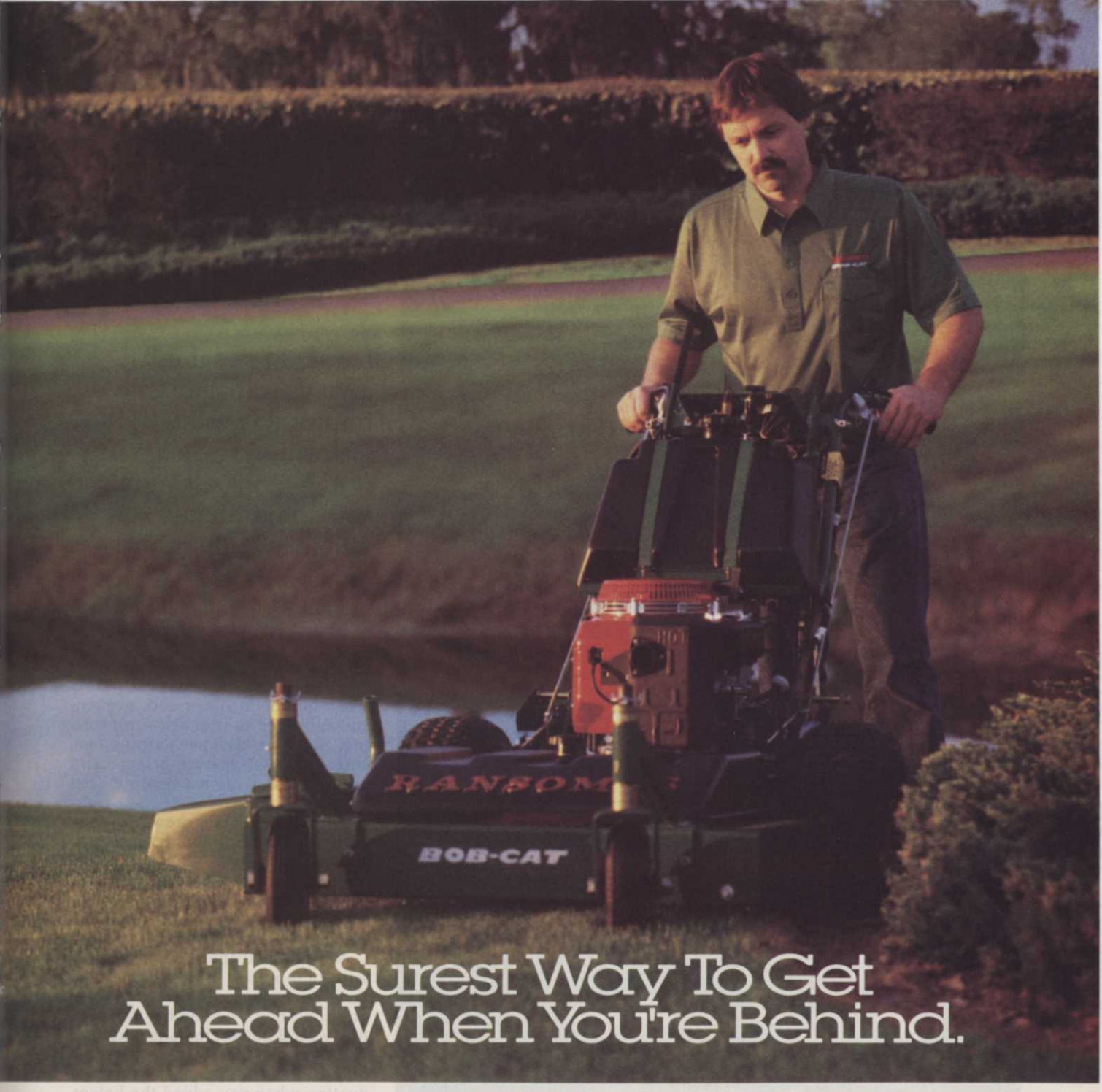
LOUISVILLE, Ky. — With the addition of four acres of commercial equipment, the seventh annual International Lawn, Garden & Power Equipment Expo will feature its most extensive showcase of products yet.

The July 29-31 show at the Kentucky Fair and Exposition Center here is expected to draw more than 22,000 people from all over the world. It features the latest innovations in mowers, sprinkler systems, chainsaws, engines, patio furniture and other outdoor leisure products and power equipment.

"As the commercial segment of the show grows, we expect to see an ever-increasing representation by commercial end users, plus dealers and distributors who carry commercial products," says Expo '90 show director Warren Sellers.

There will be 550 indoor booths and the equivalent of 14 football fields of outdoor demonstration area. In addition, there will be six free seminars to help dealers and retailers increase their efficiency, sales and profits. The sessions will cover customer service, merchandising, the commercial market, effective selling, rentals, Yellow Pages advertising, extended warranties and pricing.

Pre-registration for the show is free; it is $10 at the door. For more information, call Expo '90 at (800) 558-8767 or, in Kentucky, (502) 473-1992. □




# The Surest Way To Get Ahead When You're Behind.

Growing commercial landscape businesses are getting behind Ransomes' Bob-Cats. These rugged, easy to handle mid-size mowers are built for daily use. Each "Cat" is built with state-of-the-art precision utilizing high quality commercial grade components to assure ease of maintenance with less down time.

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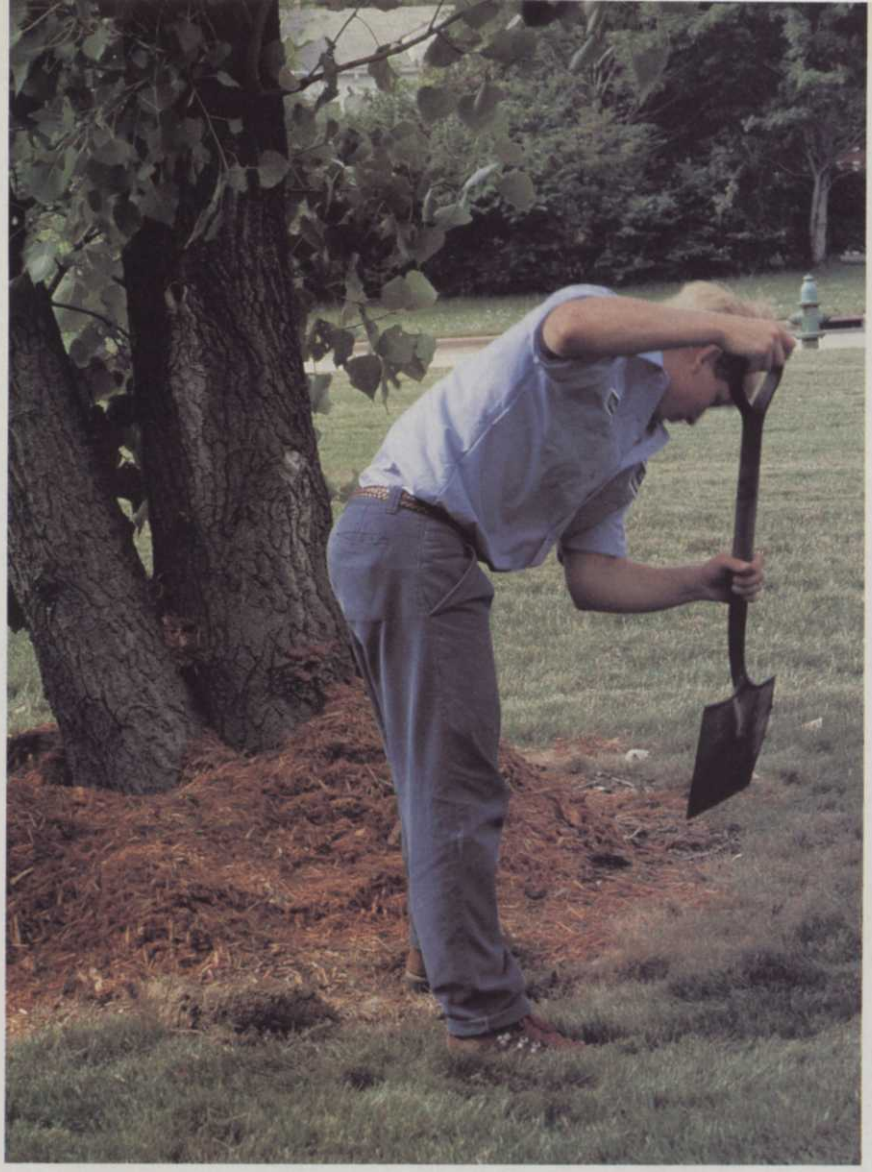

**Efficiency is not always increased as field crews grow in size. It is sometimes better to divide large crews into smaller two- and three-man crews and teach them to function as separate work units.**

# SMALL CREW THEORY

Larger crews don't always translate into improved productivity. Determining how many is enough is essential into maximizing efficiency and profit.

*by Philip D. Christian III*

The size of the most productive landscape maintenance crew has been discussed, argued, and subjected to trial-and-error testing. Since landscape maintenance emerged as a separate or specialty business, the issue has become even more important.

By adding mobile crews, we discovered the importance of correct crew sizing. In today's competitive labor environment the need for higher productivity and increased quality suggest a "new look" at sizing landscape maintenance crews.

Most landscapers have worked with one-person crews. Remember how much you could accomplish in one long day? Remember the first really good helper, the one who read your mind and did what you wanted him to do? You increased your production when you added the helper, but you did not double it.

## One-man crews?

Landscape maintenance is a combination or series of solo, one-person tasks. Unlike landscape installation or construction, maintenance crews do not handle heavy or awkward materials requiring more than one person to improve efficiency.

This lack of synergistic benefit on a per-task basis encourages us to think of our crews as combinations of one-person crews.

Loading heavy sheets of 4x8-foot plywood is a good example. One person can load 30 sheets per hour by himself, but a crew of two can load 75

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sheets an hour. The difference is called synergy, which means that the whole is greater than the sum of its parts. By working together, the plywood-loading crew can increase the output per person from 30 sheets an hour to 37½ sheets per hour.

### Creating synergy

In landscape maintenance work we do not perform activities that offer opportunity for positive synergistic effect. In fact, we have the opposite. When we increase crew size we lose efficiency.

For example, send one person to a job that takes four hours lapsed time. Now send two people with the same equipment the same distance to produce the same work, and it takes 2.4 hours in lapsed time but 4.8 hours in man-hour time. The two-person crew did it much more quickly—2.4 hours compared to four hours—but more time was spent in man-hours and therefore it became less efficient.

In some cases mowing the property in a little over two hours rather than a half day could be a worthwhile trade-off for the inefficiency. The important issue is to recognize that the more people we send to the job, the faster it is completed, but it is also less efficient in total man-hours spent.

### What's the cost?

Your cost is proportionate to man-hours spent, not lapsed crew time. The small two- or three-person crew will not effectively produce all size properties.

One drawback of small crews on large properties is that they cannot complete the work fast enough. They spend too much time on-site. One answer to that problem is increasing the crew size. All that is needed is a crew-cab truck. You will be able to send as many as six people to one property and "knock it out" then move on to the next job.

Large crews are fun to work with. They appeal to the social side of our nature, making it easy to build enthusiasm. Large crews make the members feel safe and secure. They feel as though there are enough of "us" to get it done.

Production managers like large crews because absenteeism does not cripple the production effort. Supervisors, especially non-producing supervisors, like a lot of people to look after. It makes them feel needed.

### Is bigger better?

Crew members also like large crews. It is like being on a team. You don't feel the pressure to produce. They have more freedom to do the things they enjoy as long as they keep busy.

Property owners/managers love big crews. They are taught in property management school the more people running around on their property the better! They sometimes demand contractors get more people on the job and "get it done!"

Crews working a specific route are often sized to fit the largest property. Crews seem to grow by themselves. Supervisors and production managers often add one member as "insurance" against anything going wrong.

Everyone likes large crews except the person directly responsible for profit. In some cases he or she does not know that large crews (more than three people) are the problem rather than the solution. They blame people, the pricing system, or the weather for the production crisis that is reducing profits.

*Larger crews may finish faster, but less efficiently.*

### Large crew myths

Increase in man-hour efficiency is only one of the many myths about large crews (see related article). Another popular myth is that large crews insure quality work. This was born in the belief that it takes more time to do quality work, and non-quality work is faster and saves time. Neither are true.

Quality is the result of a process that includes trained people operating the correct equipment according to a set procedure. In large crews where accountability is minimal, quality is often sacrificed.

Owners/managers like large crews on site. When you are behind schedule, the first solution is to add people. Desperate owners may even dictate specific crew sizes and threaten to withhold payment if these demands are not met. In most cases this "knock-it-out" behavior is an attempt to correct past performance problems and force the contractor back on schedule.

### Separate, not equal

In this situation don't increase the crew: bring in a separate crew, divide the property into appropriate zones, and then "knock it out." Once back on schedule the owner/manager will accept, and become accustomed to, fewer people on the job weekly.

The myth that large crews provide better use of supervision is a throwback to factory or assembly-line thinking that really does not apply to mobile crews. The notion that one strong supervisor can supervise five people as easily as two and still keep up his production responsibility does not apply to mobile crews either.

Some supervisors try to "keep the men together." Supposedly they are easier to supervise; but in reality, this herd mentality further reduces productivity. Large crew supervisors must make a choice to reduce or eliminate productivity in order to keep five men up to speed, or allow their productivity to drop to maintain individual productivity.

### The best combination

Most large crew supervisors do a little bit of both and lose both productivity and quality. The combination that seems to work best is a full-time working foreman with one or perhaps two crew members trained to require very little supervision.

Divide large crews into smaller two- and three-man crews and teach them to function as separate work units. When large properties require more man-hours than a three-man crew can generate, divide the property into two zones and send two crews to produce the work.

Each two- or three-person crew should have production and quality goals for the day. Even though they may be in competition on the same property, they are evaluated them on that day's performance. **LM**

Philip D. Christian III is a business consultant with All-Green Management Associates. His office is in Alpharetta, Ga.

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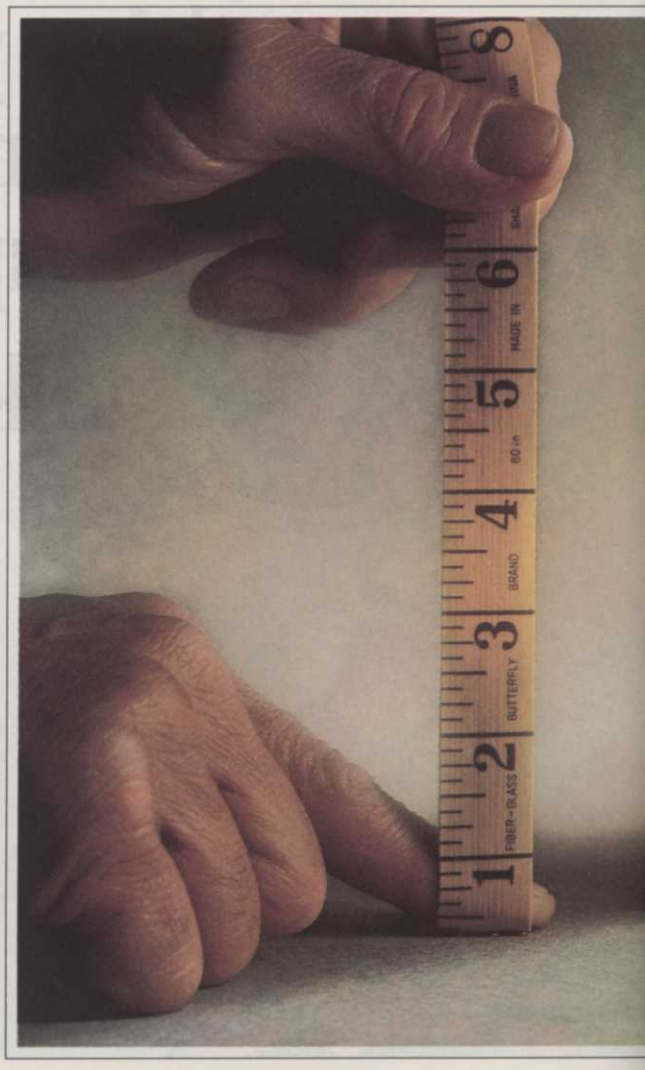
# Introducing Tempo For Home Lawns And Ornamentals.



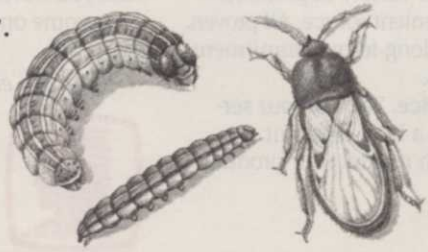

Use new TEMPO™ 2 ornamental insecticide and it will become your new standard of measure for all other insecticides. New TEMPO is the first affordable pyrethroid labeled for both ornamentals and home lawns. Better yet, it treats the same area as effectively as the leading insecticide, but with 80% less active ingredient. And that's a sizeable difference.

*Weigh the alternatives*. New TEMPO uses approximately 80% less active ingredient than the leading insecticide. Which means there's approximately 80% less chemical for you to carry around. And 80% less chemical to impact the environment.

# How To Size Up

*Measure the effectiveness*. TEMPO is a broad-spectrum, advanced-generation pyrethroid.

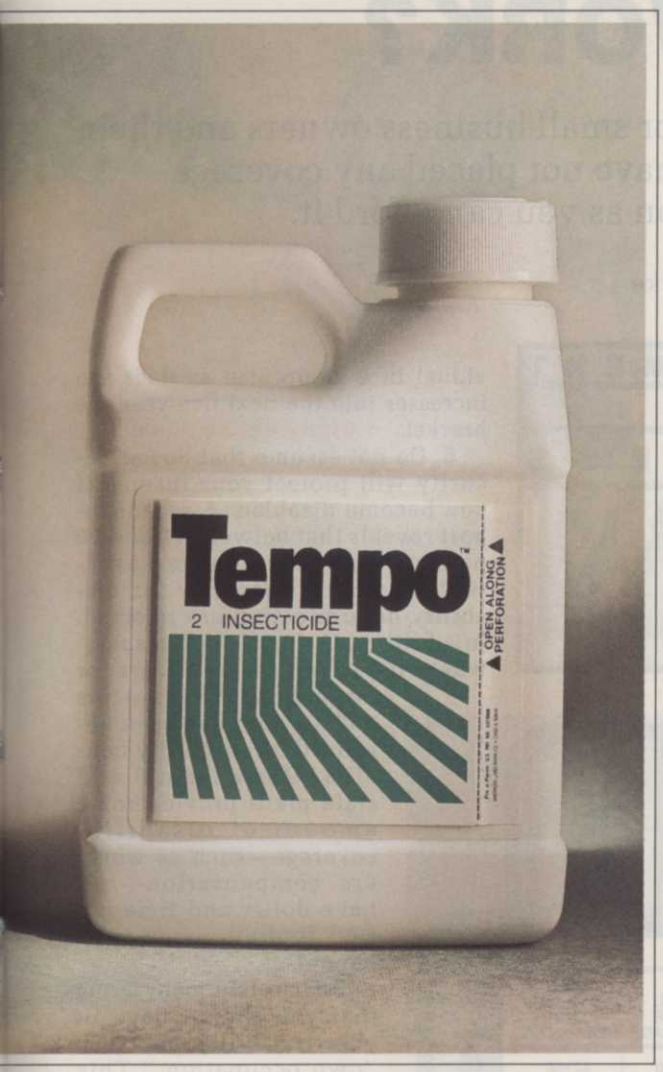
In simple terms, TEMPO effectively controls the surface-feeding insects attacking your customers' lawns. Plus, TEMPO controls the toughest ornamental pests. So using TEMPO eliminates the need to stock several different insecticides.



TEMPO effectively controls surface-feeding pests like cutworms, armyworms, chinch bugs, and sod webworms.

Here's another good reason to put TEMPO in your tank. More and more of your customers have a growing concern about Lyme disease. TEMPO effectively controls the deer tick which carries the Lyme disease virus.

*Calculate the cost*. TEMPO is the first affordable pyrethroid labeled for use on home lawns. Better yet, it's competi-




And 80% less chemical means fewer handling, mixing, and disposal hassles. In addition, TEMPO tank mixes with most fungicides and fertilizers.

*Analyze the safety.* TEMPO has a very low mammalian toxicity. So TEMPO offers maximum safety for your customers and your employees.

TEMPO is not a cholinesterase inhibitor like other insecticides. So you don't have the chore of constantly monitoring your applicators. And you don't have the applicator downtime caused by cholinesterase depression.

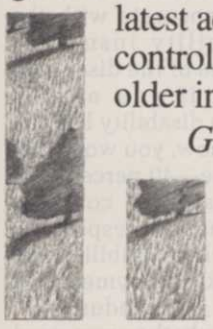
TEMPO reduces exposure to your customers, your employees, and the environment.

*Add it all up.* Effective broad-spectrum control on both lawns and ornamentals. Reduced handling, storing, and disposal. Reduced potential for exposure to your customers, your employees, and the environment. Plus, TEMPO has virtually no odor. And it's competitively priced.

Now contact your Mobay distributor or Mobay representative. Then compare insecticides. We think you'll find that new TEMPO has some sizeable advantages.

# Your Insecticide.

tively priced with what you probably use right now. So with TEMPO, you get the latest advancements in insect control for the same price of the older insecticides.



TEMPO uses 80% less active ingredient than the leading insecticide.

*Gauge the work involved.* TEMPO uses 80% less active ingredient than the leading insecticide. So, TEMPO takes up 80% less storage space, both on and off the truck.

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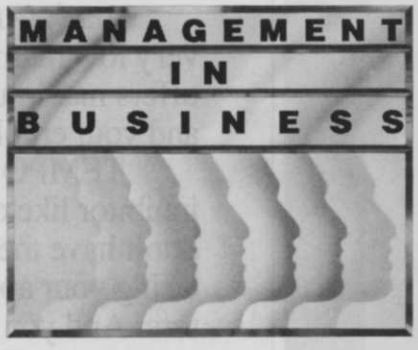
# CAN'T WORK?

## Disability insurance coverage is critical for small business owners and their key management personnel. If you have not placed any coverage in force yet, consider it as soon as you can afford it.

*by Ed Wandtke*

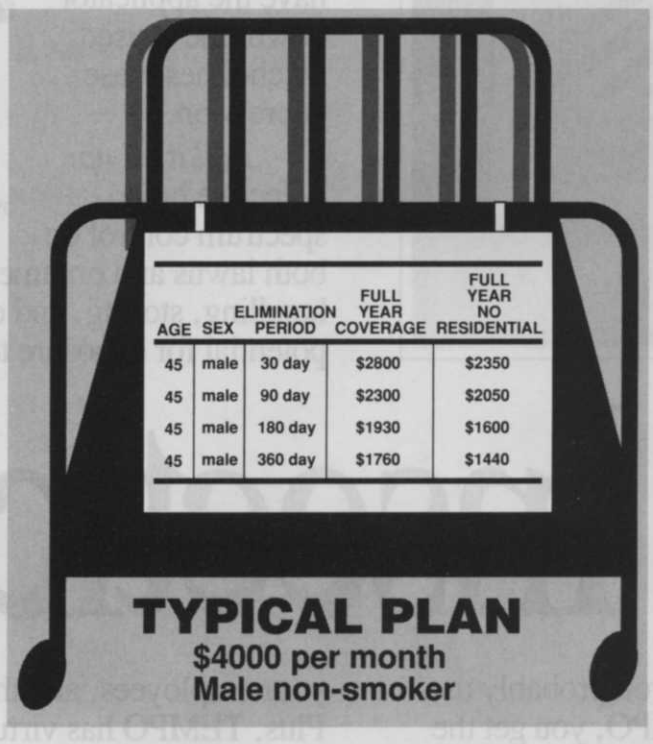



As the green industry matures, one of the realities that all owners need to face is the physical impact of this stressful and seasonal business on their bodies.

Various insurance coverages can protect you, your family and your business in the event a health problem prevents you or a key employee from working. One affordable coverage, disability income protection, can be very confusing to select and buy.

One of the principle reasons for buying disabilty insurance protection, according to current medical data, is that more than 70 percent of males and 40 percent of females between the ages of 35 and 65 will be disabled for a period of 90 days or more during these working years. If you are the owner or a key employee in your company, this could be devastating to your individual income. Buying some protection will afford you peace of mind.

Some of the buying decisions you must make are type of policy, waiting period, amount of coverage and benefit payment. A wide range of options should fit each policyholder's requirements. The following ideas should be helpful in discussing the type of disability policy that will fit your needs.


AGE SEX ELIMINATION PERIOD FULL YEAR COVERAGE FULL YEAR NO RESIDENTIAL
45 male 30 day $2800 $2350
45 male 90 day $2300 $2050
45 male 180 day $1930 $1600
45 male 360 day $1760 $1440
TYPICAL PLAN
$4000 per month
Male non-smoker

**1.** A key requirement is to be certain that the policy is non-cancellable and guaranteed renewable. You definitely do not want to find out that your policy will not be renewed just when you need it the most.

**2.** Do not buy an optionally-renewable policy since it can be cancelled on its anniversary date. This is not a very widely-sold policy, but if your premiums appear too low compared to other policies that you are evaluating, it may be because this clause is included.

**3.** Be certain that you have adequate cash reserves to financially survive the elimination (waiting) period before benefits are paid to you. If you have a 90-, 180- or 360-day waiting period, the amount of the insurance cost will be reduced about 35 percent per increase in the elimination period.

**4.** Do not rely on group disability insurance coverage today as your primary coverage. Group policies can be cancelled, the benefits reduced, or premiums increased based on the experience of the group. In addition, premiums will increase for each individual in a group plan as their age increases into the next five-year age bracket.

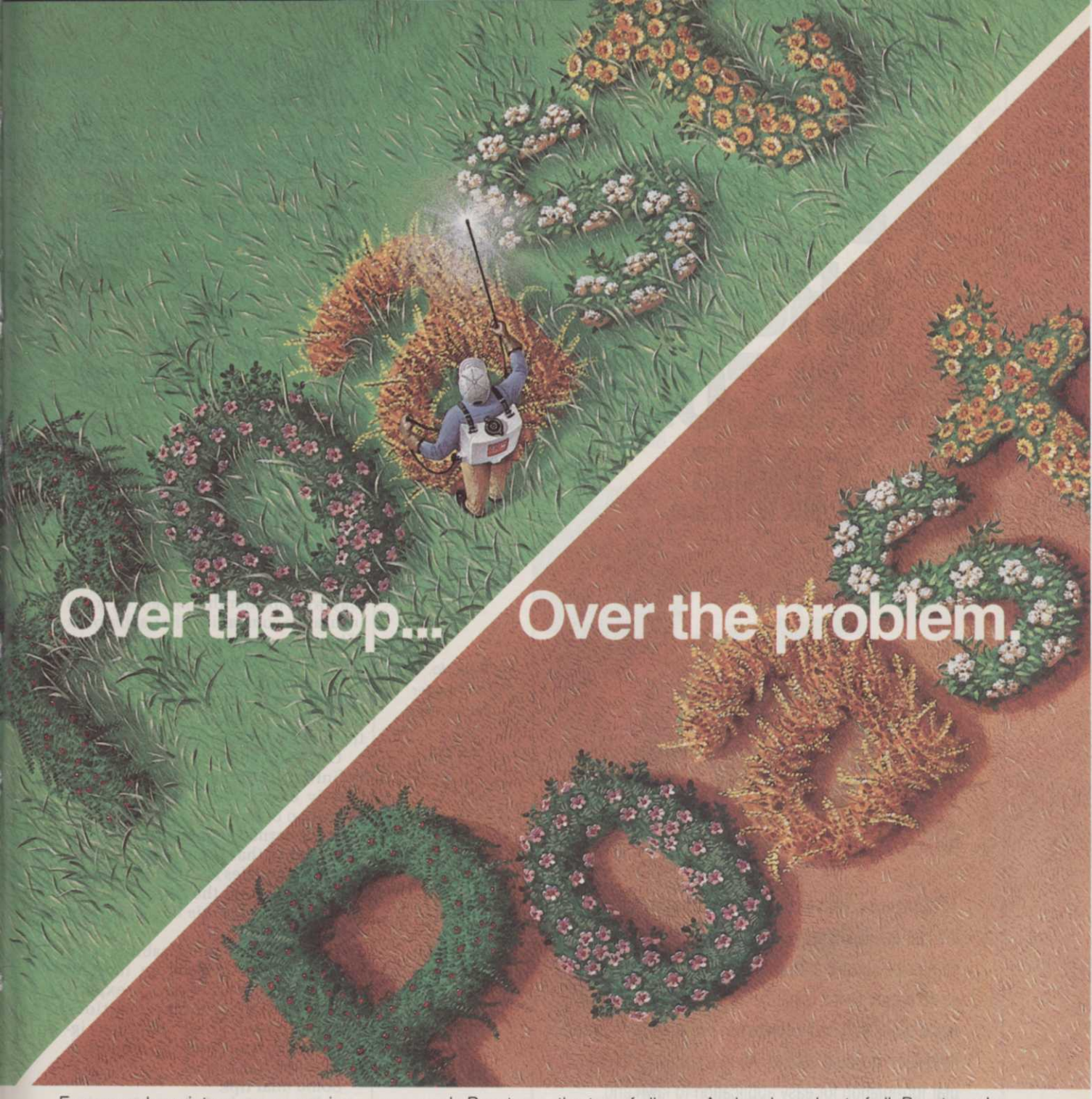
**5.** Do not assume that Social Security will protect your income if you become disabled. A recent report reveals that between 70 and 90 percent of the individual cases presented to Social Security for disability determination are rejected. In addition, it usually takes somewhere between 1½ and 2 years for Social Security to process a claim that has been approved for disability benefits. Other federal and state plans provide some amount of disability coverage—such as workers' compensation—but have dollar and time period limitations on total benefits.

**6.** One of the many terms that you should have in your disability policy is "own occupation." This means that if you are unable to perform the job that you performed prior to the disability, you will continue to collect disability coverage even if you enter some other career.

**7.** Another coverage that you should have in your basic contract is "residual benefit." This is a benefit that will pay you disability in the event that you cannot continue to make an income level commensurate with the amount of disability insurance coverage at the time of the disability.

For example, if you earned $100,000 before the disability but can earn only $60,000 now, you would receive the difference—40 percent—of your disability insurance coverage amount. This benefit is especially helpful if there is the possibility that you would not seek employment in a field outside of the green industry.

After deciding whether you need this benefit for yourself, company or a key employee, the next issue to ad-

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dress is its cost. The following are three ways to lower the cost to you if it is needed:

- Have an elimination period which is the longest you can live with—in terms of both cash reserves and insurance premiums. At one insurance company, a $4,000-a-month plan on a male non-smoker is shown on page 48.

This table shows the annual premium savings that is available depending on the length of the elimination period. In addition, the elimination of the residual benefit does offer some additional savings for most individuals.

Another way to keep premiums low is to have the disability benefit stop at a fixed age such as 65. This may save you some money initially, but I recommend a lifetime disability policy as the better coverage to purchase.

If you and your company have three or more key executives that you may wish to offer this benefit to, some insurance companies offer a discount of between 10 and 15 percent for writing three policies at once.

Also, make sure you define the type of work that you would be covered for. The broader the definition, the higher the premium.

Often the policy will have its own definition of terms. Have the agent clearly explain and obtain written definition of key terms that you need to be concerned about. One definition of disability that is currently in most disability policies is: "the individual's ability to perform the substantial and material duties of his or her current occupation."

Other definitions of disability often take into consideration an individual's past education, work experience, training or other positions previously held. These definitions ignore the current earning and work level of the individual.

Some final tips:

- Be careful of the policy that seems to cover all of the terms that I have mentioned.
- Remember to act before an individual becomes disabled rather than after.
- Be certain that the policy you choose is annually renewed and guaranteed.
- Keep your coverage as broad as possible in defining your work type.

Stay healthy. But if you do need coverage, disability insurance can truly be a financial life-saver. **LM**

Ed Wandtke is a senior consultant with All-Green Management Associates in Columbus, Ohio. He focuses on operations and financial questions.

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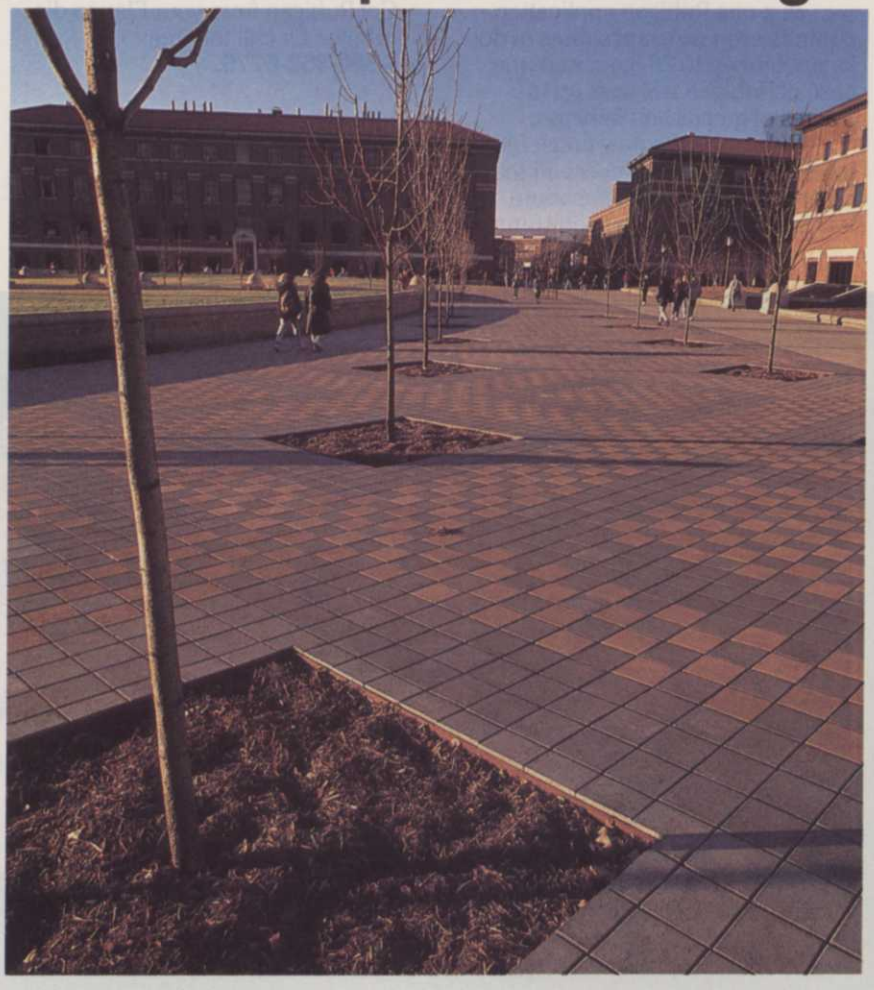
# From sweet spot

# ...to dollar spot (!?%!)

# Paving stones used in campus remodeling

A 20-year remodeling plan underway at Purdue University has brought impressive cosmetic changes to the college's Purdue Mall. Pedestrian traffic has been made easier and safer by removing a mid-mall parking area and diverting motor traffic to a perimeter parking garage. The scissors effect of intersecting avenues at cross purposes, which use to impede pedestrian progress has been entirely eliminated.



**The stones used to pave Purdue Mall have a minimum compressive strength of 8,000 psi (photo courtesy of Mobay Corporation of Pittsburgh).**

### Paving stones underfoot

To create a colorful and workable design, landscape architects Rundell Ernstberger and Associates of Muncie, Ind., used colored concrete paving stones, arranged in checkerboard patterns. The polychromatic pavers were custom-colored by Interpave Corp. of Cincinnati. Interpave used six varieties of Bayferrox synthetic iron oxide pigments from Mobay Corporation of Pittsburgh, a Bayer USA company.

"The pavers tie together the diverse elements of the mall," says Eric Ernstberger, a partner in the architectural firm.

"The checkerboard pattern," explains Ernstberger, "was selected to provide a complementary neutral field among the very busy pattern of radial walks and concentric walls."

### Colors well-chosen

The color palette of the paving stones, says Karen Fennerty, landscape project manager for the university, is based upon Purdue's black and gold colors, to which were added pigments of beige, blue-grey and two shades of red.

All six colors are blended together in the pavers. Dominant color tones of charcoal and red, which create the checkerboard effect, are achieved by increasing the ratio of these primary pigments within the integral blend.

The six-color matrix of the pavers creates its own visual experience. As light lingers over the mall, it elicits overtones of one or another of the six integrated colors.

"There is a subtle shifting of rich color tones in color cadence with the overhead movement of the sun," says Fennerty.

### Pavers remove easily

Thomas Schmenk, director of facilities planning for Purdue, says the pavers can be removed and replaced if necessary.

"The pavers can be removed by hand to make underground repairs," explains Schmenk, "and then replaced, without leaving the tell-tale patchmarks that disfigure asphalt or poured concrete surfaces."

According to Kevin Piers, vice president of Interpave, "when the pavers are properly set in sand, they allow for movement due to freeze-thaw cycles without cracking or breakage."

### Important first steps

The paver installation starts with an 8-inch gravel base, placed, graded and compacted over a filter fabric. Coarse bedding sand is placed over the prepared base, to a depth of one inch and then screened to produce a finished, even surface. The pavers are fitted together by hand in a pre-planned pattern, and all the cutting to fit the shapes of the paved areas is done on site.

A plate vibrator is used to firmly seat the stones for initial interlock. Then, sand is spread over the surface and the entire area is vibrated again, filling in the joints between the pavers and locking them in place.

The pavers measure eight and six inches square, with a 1/8-inch bevel. The cost of installing the pavers over a prepared base was $4.50 per square foot.

Particular care was taken in fitting the pavers to the curves and circles in the fountain promenade area.

"In circumlinear designs, the pattern is carefully calibrated so that the bond comes back together when an arc or circle is completed," says Russell Wilson, field superintendant of the LPS Pavement Company of West Chicago, Ill. According to Wilson, cutting the pavers in the radii of circles required much precision, which was acquired by using diamond blades to insure a tight fit. **LM**

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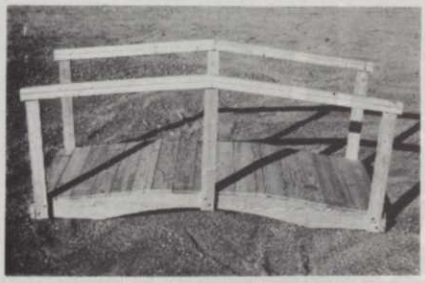
# PRODUCTS

## A way to bridge gaps in landscape designs

Bloomers Unlimited of Rocky River, Ohio has just released a landscaping bridge for use around steams and ponds or just as decoration for the back yard.

The bridge is constructed from pressure-treated pine with a rounded, easy-to-grip handrail.



It is available in 6-, 8-, and 10-foot models.

**Circle No. 200 on Reader Inquiry Card**

## Front mounted sweeper works as dethatcher

The Sweepster Model HFA is a front-mounted sweeper that attaches to most tractors over 24 hp with a 540 PTO. The standard six-foot wide, 32-inch diameter brush is driven from the rear PTO.

Manual angle change 30° to the right and left is standard. Sweepster says the Model HFA can double as a dethathcher. Gentle rotating action of the brush removes debris without damaging the root system. The brushes bend as they pass over uneven surfaces and hidden objects in the lawn like sprinkler heads. This reduces the damage to both the prime mover and sweeper.

Full brush contact removes more thatch, and the soil is exposed to more sunlight, water and fertilizer, Sweepster notes. Seeds contact the soil evenly over the cleaned area. Fertilizer and water reach the soil faster. The soil warms faster because more sunlight can reach it. Wet areas dry faster.

**Circle No. 201 on Reader Inquiry Card**

## Stainless steel injector runs on water pressure

T.M.B. offers a stainless steel fertilizer/chemical injector that is an economical energy saver. It operates solely on available mains water pressure, and its large diaphram motor enables operation even under severe sandy water conditions.

Three models are available, allowing injection rates from 0.75 gph to 156 gph.

T.M.B. says the injector is easy to operate and maintain, and can be con-

MITE.

veniently automated to work with controllers and computers. Its durable, stainless steel construction allows injection of all chemicals, fertilizers and pesticides. The units make fertigation easy, affording more yields with less chemicals and fertilizers, T.M.B. says.

**Circle No. 202 on Reader Inquiry Card**

## New drainage system for synthetic, natural turf

The J-Drain SD system from JDR Enterprises of Alpharetta, GA provides a simple solution to complex drainage problems on athletic fields, golf courses and landscapes.

J-Drain SD is installed easily in narrow trenches without significantly disrupting playing areas.

In many cases, the playing area can be returned to use the same day.

**Circle No. 203 on Reader Inquiry Card**

## Seed varieties ready for the new season

Pennington Enterprises, Inc. of Madison, GA reminds distributors and turf managers of the availability of a variety of seed products.

Finelawn 5GL is an improved variety turf-type tall fescue that has ranked highly in national turf tests. It has increased drought and frost tolerance, low growing characteristics and excellent shade performance.

Flyer is an improved variety of creeping red fescue. Pennington says it adapts particularly well in medium to heavily shaded areas, and produces an attractive, dense, fine textured, dark green turf.

Triad is a mix of "top rated" turf-type tall fescue combined to give you the greatest attributes from each individual grass. Pennington describes Triad as a dense, fine-textured turf that grows well in varied sunlight and growing conditions.

**Circle No. 204 on Reader Inquiry Card**

## Sod cutter switch means improved unit

Turfco Manufacturing, Inc. has introduced the Pro sod cutter to replace the Bantam model.

Improvements have been added to the new unit, including single lever operation. The lever places and locks the cutting blade into operating position. Replaceable rubber tires on the traction wheels make it unnecessary to purchase the whole wheel.

Turfco says the Pro can cut sod in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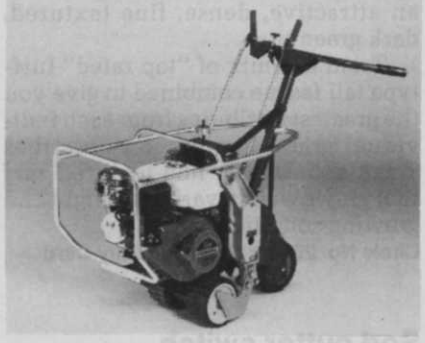
Circle No. 121 on Reader Inquiry Card

widths from 12-18 inches. 95 percent of the Pro's weight is on the drive wheels, so cutting sod is possible under most adverse conditions.

The unit is available with either an 8 hp Briggs & Stratton I/C or

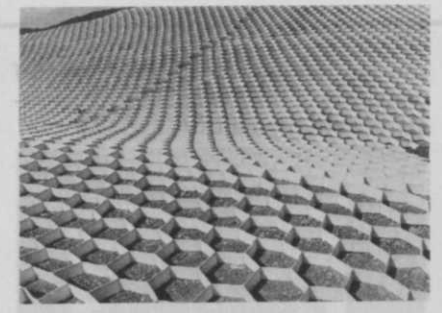


Honda engine.

**Circle No. 205 on Reader Inquiry Card**

## Erosion control matrix for heavy duty spots

Akzo Industrial Systems Company of Asheville, NC makes the Armater Geomatrix, a semi-rigid, non-woven polyester fabric designed to provide erosion protection in areas where vegetation is scarce.



When the honeycombs are filled with native soils, sand, gravel or aggregate, the geomatrix acts like a heavy blanket that covers and protects the erosion prone area.

Akzo says the matrix is flexible enough to conform to the terrain. Expanded cells are four inches deep with eight-inch sides to cover a wide area and require minimal labor to install.

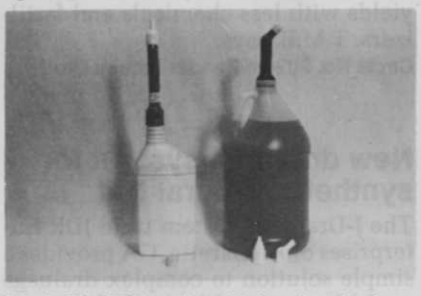
**Circle No. 206 on Reader Inquiry Card**

## Pouring device means to eliminate spills

The Multi-Spout from KK Motorcycle Supply of Dayton, Ohio was invented to reduce spills and do away with messy funnel-filling.

Multi-Spout fits over the mouth of bottles, jugs and other containers so that liquid may be poured into hard-to-reach places like mowers, snow blowers, trimmers or golf carts.

A small opening adaptor tip allows for pouring into small spaces. The spouts are durable and flexible.



**Circle No. 207 on Reader Inquiry Card**

## Mower deck lifts to clear obstacles

Ford New Holland's New CM224 and CM227 diesel-powered commercial mowers feature decks that flip up.

For easy-access cleaning or maintenance, the deck flips up to a full upright position without tools.

When in use, the deck raises higher

to clear curbs and for easier ramping onto trucks or trailers.

**Circle No. 208 on Reader Inquiry Card**

## Wetting agent is new, improved and effective

Grace-Sierra Horticultural Products Company of Milpitas, CA, has introduced an enhanced Hydraflo Liquid, a non-ionic soil wetting agent.

The improved liquid mixes more easily and rapidly in all water tem-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The model 22 Building (22' x 9' x 8') holds up to forty 55 gallon drums with maximum storage capacity of 10 tons. Smaller models are available in 15', 10', 8', and 6' sizes. One year warranty.

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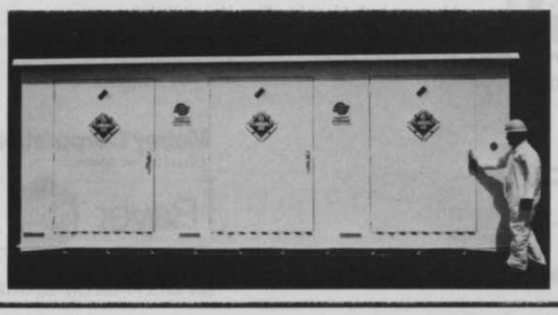

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| 135,134 | AMERICAN SALON | 15,209 | LP/GAS |
| 12,821 | AQUA | 17,322 | MEAT PROCESSING |
| 29,475 | BEVERAGE INDUSTRY | 14,496 | NEUROLOGY |
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| 102,224 | DENTAL MANAGEMENT | 14,105 | PETS SUPPLIES MARKETING |
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| 35,707 | DVM NEWSMAGAZINE | 10,100 | POULTRY PROCESSING |
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peratures, eliminating the gelling previously experienced when the wetting agent was mixed with extremely cold water.

New Hydraflo Liquid has tested effective in temperatures as low as 30° F. New technology affords increased resistance to leaching, meaning that lower application rates are needed.

"This new formulation is an easier and more economical method of ensuring strong, healthy turf," says Mark E. Broxon, marketing manager. "And substantial savings are realized in both product and application labor costs."

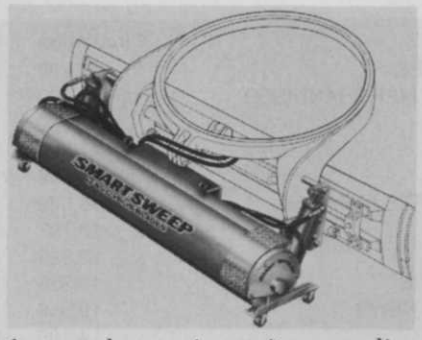
Hydraflo is also manufactured in a granular form.

**Circle No. 209 on Reader Inquiry Card**

## Broom unit saves time for roadside manager

A grader-mounted rotary broom called Smart Sweep is available from Bucyrus Blades.

The broom eliminates the need for expensive, tow-behind or independent road-sweeping units, according to Ron Robertson, product manager




The unit can be mounted on virtually any grader in use today, says Robertson, and enables one operator to blade and sweep in one pass.

The unit can be installed in 15 minutes, and comes in eight- and 10-feet lengths.

"The Smart Sweep broom is particularly useful in routine pulling-the-shoulder activities," says Robertson, "but also serves in new surface construction and even snow and/or gravel removal."

**Circle No. 210 on Reader Inquiry Card**

## New way to repair damaged PVC piping

The Leister Ghibli uses hot air at very precise temperatures to weld, bend or shape all kinds of plastic.

Temperatures are electronically adjustable between 20° centigrade and 650° centigrade to accomodate a variety of other uses such as removing paint, de-icing, soldering, desoldering and drying.

The Leister Ghibli is double insulated and comes in 110V and 220V. The right temperature is reached in three minutes and remains constant despite the type of nozzle being used, fluctuation in voltage or changes in airflow.

**Circle No. 211 on Reader Inquiry Card**

## Broad spectrum control with tree, shrub insecticide

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**Circle No. 212 on Reader Inquiry Card.**


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Keynote Speaker Michael LeBoeuf talks on *'Winning Customers and Keeping Them for Life.'* Mail the coupon below today for details and registration information.

### *Landscape and Grounds Management Conference*

This year's ALCA/PGMS Landscape and Grounds Management Conference features the latest information on a multitude of topics including: Training for the '90s, Customer Service, Plant Material That Warrants Attention, Maintenance and Cost of Utilizing Wild Flowers, Sports Turf and Strategies to Increase Your Bottom Line. The Keynote speaker, Allan Cimberg, will give a presentation, *'How to Sell in Tough Times to Difficult People.'* Mail the coupon below for more details and registration information.

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Atlanta based national organization seeks charismatic individual for executive director's position. Previous green industry involvement essential and prior association experience preferred. Must have administrative, personnel, finance and marketing skills. Send resume and salary requirements to: Professional Lawn Care Association, P.O. Box 37462, Cincinnati, Ohio 45202. 7/90

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**LANDSCAPE DIVISION MANAGER:** well established, rapidly growing company seeks individual to take over for retiring manager. Individual must be able to run both a maintenance and a planting division simultaneously. Requires exceptional organizational/management skills as well as complete command of plant materials and maintenance techniques. For consideration contact David Gorter, 855 Skokie Highway, Lake Bluff, IL 60044. 708-615-0800. 7/90

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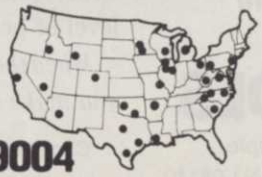

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**BOSSARD** *from page 19*

calcine clay should be used on a typical softball field, 14 tons on a high-quality baseball infield like his. "Make sure you have a minimum four inches of soil as a base," he says.

The existing park has a bluegrass infield cut to ⅞-inch, by edict of the White Sox hitting coach. It is cut every day; Ferromec and eight pounds of nitrogen per year are used to keep it green.

The new park's outfield, which will be a mixture of seven cultivars, will be cut at 1½ inches, same as the existing park.

To combat fusarium and pythium, Bossard applies Subdue fungicide the first or second week in June and Alliette fungicide three weeks later. The only other pesticide he mentions in casual conversation is Daconil, which is used late in the season for snow mold control. This season, he is remaining true to his program, except for the Daconil application which will be made only if the Chisox make the AL playoffs.

Once the new park is opened, it will be business as usual, just as it was for his grandfather Emil, his father Gene, his uncles Harold and Marshall, and his cousin Brian (now at Yankee Stadium). There was never a doubt in Roger's mind that this was meant to be.

"I can remember being five years old and pretty much knowing what I wanted to do," he notes. "And today, I'm doing exactly what I want to do, and I'm getting paid for it."

*—Jerry Roche*□

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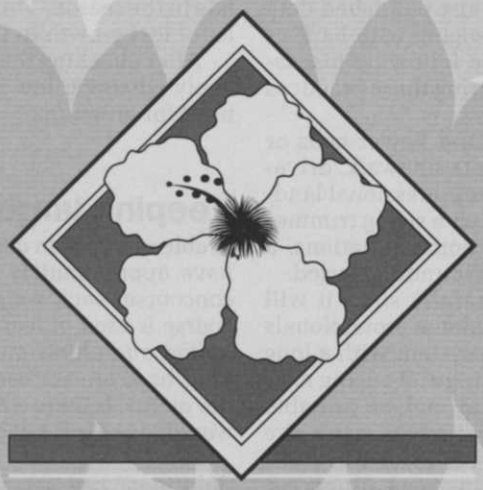

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Circle No. 112 on Reader Inquiry Card

# PROBLEM MANAGEMENT

by **Balakrishna Rao,** Ph.D.

## No bark vs. chem studies

**Problem:** *Have there been any studies published comparing the cost of edging with bark vs. chemical controls? (California)*

**Solution:** I am not familiar with any published data comparing the effectiveness of edging with bark or chemical controls. However, the following discussion mught be helpful in considering these practices for edging problems.

Edging is generally done around flower beds or where turfgrass meets the concrete sidewalk, driveway, etc. In these situations, most professional landscape managers prefer to use either a string trimmer or mechanical power edger. In some situations, a non-selective herbicide such as Roundup is used.

Roundup should be used carefully since it will kill any vegetation upon contact. Some professionals like to use Monsanto's Expedite system with a long wand, which allows good trimming and edging near difficult areas. This system may not be suitable around highly visible quality turf becasue the treated area will brown out with dead turfgrass, which could be objectionable. In these situations, the string or power edger would be desirable.

## Maintaining soil structure

**Problem:** *Will the carrier Balan or Ronstar G change to soil pH or structure? (California)*

**Solution:** No. Representatives from Elanco Company, the manufacturer of Balan, and Rhone-Poulenc, the manufacturer of Ronstar-G, indicate that this product does not change soil pH or structure.

I also believe that if the products are applied to the label specifications, there should not be any adverse effects on soil property.

## Late-season fertilization

**Problem:** *My late-season fertilizing program consisted of a granular application of 32-3-10 with a water insoluble percentage of 7.7 percent nitrogen at a rate of 1.5 AI/acre. With the exception of a very cold December, we had a very mild winter with an abundance of rainfall. I am concerned that the turf's protein and carbohydrate reserves are depleted and that normal spring green-up and root growth will be reduced. Could this happen and, if it does, would I have to make a supplemental application in early spring to make up for the lost nitrogen? (Ohio)*

**Solution:** Even though we have experienced above-normal temperatures during February this year, lawns are still dormant because soil temperature didn't stabilize above 50°. Also, even though we had high temperature days, it was not enough to stimulate leaf growth.

Based on temperature extremes experienced in your area, I don't think it's necessary to provide a supplemental application in early spring to make up for the nitrogen loss due to leaching and/or plant use.

It is not advisable to provide an early spring application of nitrogen, particularly since you fertilized late in the season. This application would stimulate a lot of leaf growth in the spring as dormancy breaks.

After checking the condition of the turf in spring, apply whatever low rates of fertilizers you feel you need for green-up.

## Keeping large plants mobile

**Problem:** *I work in a large office building in which we have approximately 75 large plants along a main concourse, each weighing about 200 lbs. The concourse is used at least twice a month for various activities and plants must be removed each time. It's a long, hard process because of the weight and height of the plants. Is there a method or type of container that would make this job easier? (Ontario, Canada)*

**Solution:** I can see where transporting such large plants would be time consuming and laborious. There are a number of containers designed for easy moving, including ones with recessed bottoms to fit casters.

If your containers have flat bottoms, casters may not fit underneath and slip off. Since casters under a recessed container are not obvious, they could be left in place.

Take care to select casters for the weight you are dealing with, which is generally based on the container's diameter. Each caster would hold approximately 50 lbs.

Another solution would be for you to make your own platforms with heavy-duty wheels to place and secure the plants in position during frequent moving operations. **LM**

**Balakrishna Rao is Manager of Technical Resources for the Davey Tree Co., Kent, Ohio.**

Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

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